THE BUILDER

A JOURNAL FOR THE ARCHITECT AND CONSTRUCTOR.

WITH WHICH IS INCORPORATED "THE BRITISH ARCHITECT."

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"HOW TO PROVIDE HOUSES."

THE Independent Labour Party has issued a manifesto defining the steps that a Socialist Government would take to solve the problem of the erection of the working-class house. While we are in entire agreement with the statements illustrating the disastrous results due to bad housing, we cannot accept the basic assertion that "the present housing shortage is the most glaring example of the failure of profit-making capitalist society to supply the needs of the nation," made as if such a statement embodied a self-evident truth. If we are to examine what "capitalist society" was able to do in housing the people, we must go back to the years prior to 1910, when we find conditions very different from what they are now. Then a sufficient number of houses were built to accommodate the population without any call being made upon the public purse. We admit that the houses were not as a rule what they should have been, but we cannot attribute the poor standard generally adopted to the evil influence of a "capitalist" system. A more conscientious, educated, and idealistic society, still working on "capitalist" lines, and within economic limits, might in pre-war days have produced really excellent results, and in certain cases such were actually obtained. Capitalism misapplied is as harmful as any other misapplied system.

A further paragraph informs us as an interesting fact that "750,000 houses are required, and 85,000 unemployed builders are prevented from building them." Some of our friends would agree with this and say that the trade unions are doing the preventing, but as the Independent Labour Party can hardly mean that, we should like to know who is doing the preventing. We ask for information.

A Socialist Government, we are told, would prohibit all "luxury" building until the housing needs of the people were met. It is precisely this kind of wild legislation which is so much dreaded in such a Government. In the manifesto it is described as "intolerable that wealth should be spent and labour employed in erecting places of pleasure and emporiums for the use of the wealthy, while the children are being destroyed and the health of the people undermined by bad housing conditions." Suppose a Socialist Government, in pursuance of this avowed policy, stopped all work on large emporiums, what is to happen to those engaged on steel construction, stone carving, and marble work; to the sculptor; to the man who constructs lifts, and the hundred other elaborate fittings associated with these large stores? Are all these highly-skilled and well-paid workers to be set to build houses out of clinker blocks? In honesty, we must confess that a proposal to cause a monstrous wave of unemployment in such skilled trades for the sake of a theoretical objection to luxury is absurd. We readily admit that the flaunting of luxury, especially at the present time, is deplorable, and we also consider that the ever-increasing pretentiousness of the large store is inimical to good architecture; but it is not a case for legislation.

It is tempting enough to say that "if national effort can be organised for the purpose of war, it can be organised for the purpose of constructive peace"; but to argue thus is to overlook the fact that the national war effort was a frightfully wasteful proceeding, quite apart from the waste inherent in war itself. National efforts cost millions of pounds more than they need, and result in sending up the cost of living, a process that cannot continue indefinitely if national bankruptcy is to be avoided. The Addison scheme was an effort at national housing, and as an initial impetus and in setting a high standard it was of great value, but its ever-expanding cost must surely have indicated, even to the most sanguine idealist, that such a scheme could offer no permanent solution to the housing problem.

It is highly unfortunate that so many who are keenly concerned with this question should nail their flag to one particular mast-head and refuse to co-operate in any proposal but their own, and if their own happens to be unpopular with the bulk of their neighbours they sit down and refuse their help. The end is surely more important than the means, and one would have thought that quite enough good and satisfactory work had been done in pre-war schemes (too well known to need mention here) to demonstrate that private enterprise—or call it capitalism—is capable, when properly directed, of justifying the faith of the most exacting. At least the present Government is pledged to give it every chance of making good, and, whatever political destiny may be in store, we suggest that it is the duty of everyone who wishes to see the housing question solved to give the present system every chance. If by circumstances it should be changed for another system, we should advocate the same co-operation from those who might be politically opposed. It is easy to show how few houses for the working classes have been built during the past year and it is equally easy to talk about the Government building 200,000 per annum With the whole resources of the State behind it, working at full pressure, at a cost of nearly two hundred million pounds, it took the Government over four years to build 176,000 houses. In face of these figures, who would be bold enough to calculate the cost to the State of a Government scheme that involved building steadily at the rate of 200,000 a year? The expense of such a scheme would be so prodigious that we should soon be involved in an endless upward scramble between the cost of living and the rate of wages. Neither must we forget the inevitable inefficiency of Government control in the output of materials. The National Projectile Factories were marvellous institutions and the Ministry of Munitions an unparalleled creation; but its methods were about the only fountain that kept humour alive during the war. To create such a monster to build workmen's houses would be like erecting a steam hammer to flatten domestic flies. When the steam hammer gets the fly into position it is certainly deadly, but private enterprise—in the form of small fly-papers scattered here and there—is much cheaper, and much more efficient. Finally, our hope lies in promoting an increasing sense of responsibility rather than in any artificial prohibition of luxury, or in the regulation of prices by fantastic legislation.

Let the Independent Labour Party keep alive the insistent cry for action and reform, but let it show some faith in the public conscience and at least give it a chance to show that these problems can be solved in anatural and healthy way. Such a course of propaganda need not be at variance with any political programme, but it would allow the party to co-operate with all citizens of good will, and to work to the same end. A man or an organisation that will not help a social scheme projected by a political opponent for fear that his help may make the scheme a success may score a political point, but he is failing in citizenship, and this is remembered against him to the detriment of his own schemes when he gets the chance of testing them.

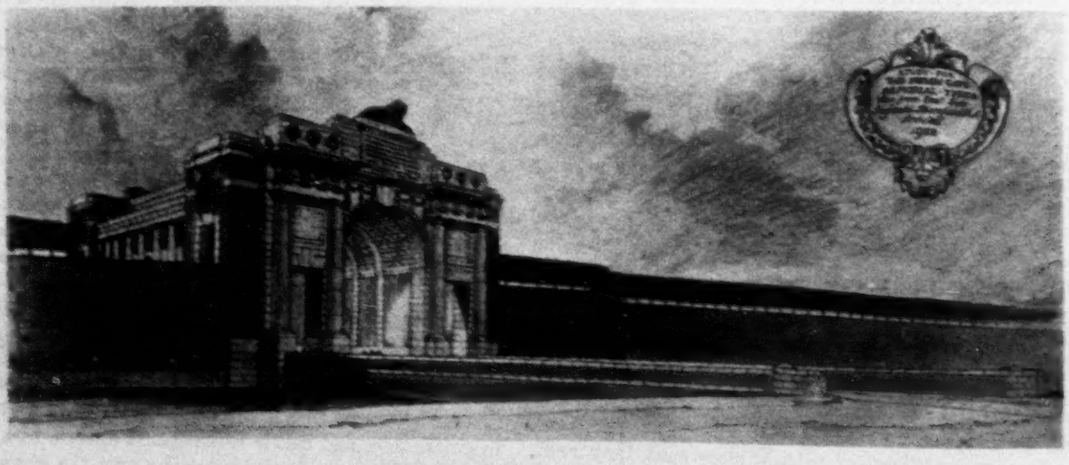
NOTES.

The Sale of City Churches. It is satisfactory to know that this matter is to receive further consideration, for it is evidently difficult for the Bishop of London to realise the strong objections felt by great numbers of people to the disposal of the City churches. Representative societies, no less than individuals, are almost unanimous in their objections to such vandalism, and if persisted in the effect on the public mind will be very harmful to the Church's influence. For there is a growing sense that there is not sufficient appreciation by those who countenance such a step of the importance of good architecture, nor for what it stands, and in destroying this witness of the past they are undoing with one hand what they hope to do with the other. For these historical, sacred buildings are witness also of the aspirations and beliefs out of which they grew, and those who find no importance in this view and would [destroy them are effecting a loss to religion itself. What advantage can there exist in such a case, when we only destroy in one place in order to provide in another? The money gained by the sale of these churches is loss if it injures the very cause for which it is to be used elsewhere. Moreover, the reasons for their destruction seem to us open to a different interpretation. In a letter from the Rev. R. J. Campbell to the *Times*, he says, "Unfortunately, the policy of ecclesiastical authority has too frequently been that of rewarding men for good service elsewhere by putting them into City livings, to whose peculiar conditions they are not suited." If this policy were discontinued and men with preaching gifts and a true vocation of service, and conscious of the extent of the need of their work, were now to be appointed, we doubt not that these churches would be filled, and that there would be no problem of the City churches to solve.

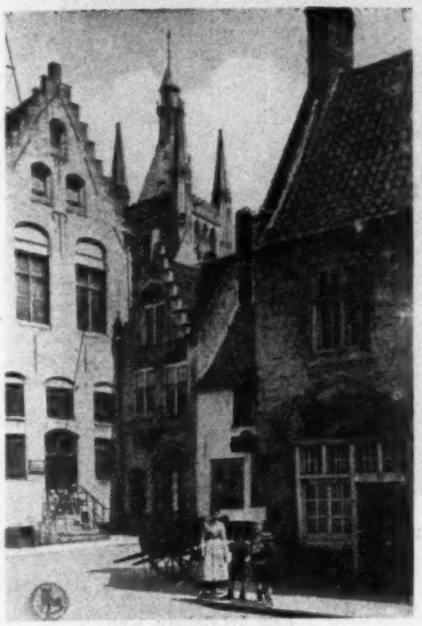
King's College Chambers, Cambridge. As supplementary to our review of the Cambridge Competition designs for King's College new Library and sets of Chambers on the 9th inst. (when we illustrated the winning design), it will be interesting to mention a few facts about the intermittent endeavours which have from time to time been made during the past 200 years to carry out these desirable and much-needed additions. The present project is the third attempted occasion for the erection of a new Library for King's. James Gibbs originally planned it to form the rear façade of a secondary quadrangle towards Trumpington-street. He placed his Library at right angles with the Senate House. This latter cost £13,000, and was opened in 1780, but it still remains an isolated fragment of Gibbs' big collegiate scheme. On the south end of his Library he proposed to repeat the skyline of the Senate House by building a Consistory and Registry set in a line with the north side of the splendid Chapel of which Henry VI laid the foundation stone in 1446. Gibbs also included in his plan an imposing central frontispiece next Trumpington-street on the site of the present lodge and screen designed by W. Wilkins, and built in 1824. That palatial pile was to correspond with "the Gibbs' building" now gracing King's "great lawn." This capacious quadrangle southward of the chapel was to terminate with a range of offices and lodge for the Provost, which would have stood next the site chosen for the present competition design for the new Library and sets of Chambers which will extend in front of "Mulberry Tree-court," "The Provost's Garden," and "the Bodley Quadrangle," overlooking the "Backs" and River Cam where King's bridge stands. The late G. F. Bodley, R.A., erected the Provost Lodge and last-named buildings in 1894. Those in front, which are to be forthwith demolished to clear a site for the present extensions, were carried out just a century ago by William Wilkins, R.A., whose design was selected against those of eighteen competitors. The College authorities compelled him, however, to accept various suggestions from three other architects—Jeffery, Wyatt and Nash—and Crosby Hall was given as a model to emulate. The Gothic quality of this coalition scheme of 1824 is evident; its demolition need cause no regrets.

Robert Adam's King's College Library. ROBERT ADAM'S handsome enterprise for the erection of a new Library for King's College* was planned between 1784 and 1789. His scheme differed essentially in detail and general form from Gibbs' proposal, which was broader in style and plainer in ideal, but Adam adopted the same position for the Library by placing it contiguous with the Senate House—indeed, he utilised that structure as an eastern flanking wing to his square-shaped Library, on the west wing of which he repeated Gibbs' Senate House, extending the composition thus laid out towards Clare College, intending to build on the intervening site still occupied by the "Public Schools." Adam's scheme likewise included an independent block similarly located as in Gibbs' layout, south of the new great quadrangle, but besides providing a lodge for the Provost at its western extremity Adam included a clever and unique circular College Hall in the middle of this southern range, which also provided several sets of scholars' rooms, terminating at the frontage line in Trumpington-street. Nothing came of these fine proposals, so characteristic of Robert Adam, who also showed many changes and doubtful elaborations of the Palladian work built by robustious Gibbs. Fortunately his "Fellows' Building" subsequently escaped mutilation at the hands of Wilkins, who contemplated Gothic

* Illustrations and many interesting particulars of Robert Adam's designs for these improvements, furnished by Mr. Arthur T. Bolton, F.S.A., appeared in the R.I.B.A. *Journal* for December 23, 1916.



Menin Gate Memorial, Ypres. SIR REGINALD BLOMFIELD, R.A., Architect. (*See p.* 800.)

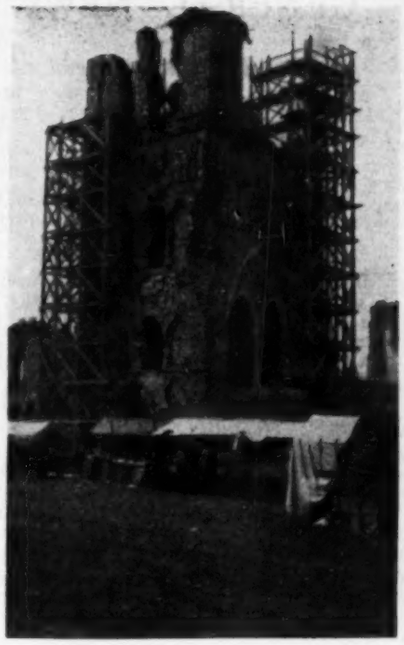


Place du Musee, Ypres. (*See p.* 800.)

changes to make it assimilate with the vertical splendour of the King's cathedral-like chapel of fifteenth-century design—a preposterous proposal.

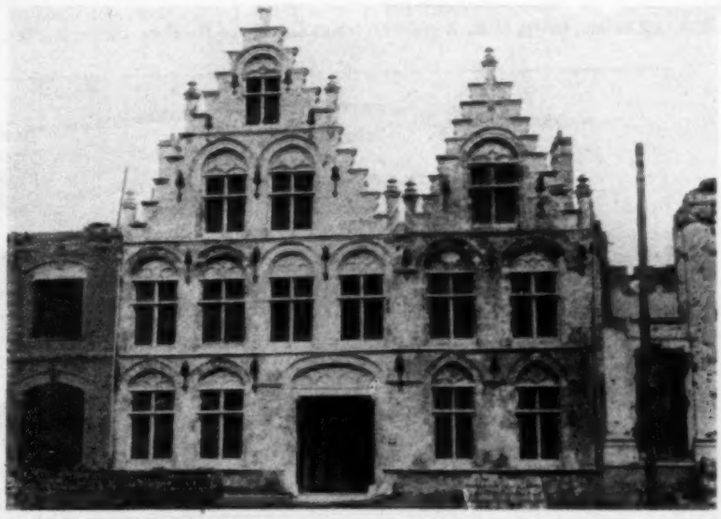
Fire Insurance and Churches. It is satisfactory to know that the articles on "The Incidence of Insurance," contributed by our special correspondent in *The Builder* for October 5 and 12, are being appreciated. Their practical application is confirmed by a communication to hand this week from a leading metropolitan insurance company taking the matter up; the company also finds the comparative lists of current prices periodically issued in our pages very much to the point. A vast number of churches insured prior to 1914 possess policies based upon the average costs of building during the early part of this century. Old yearly-published price books supply statistics of such variations. We are glad to learn that an endeavour is being made towards improving the conditions of insurance for churches and we are asked to advise as to solving this pressing problem. Ecclesiastical property owners are blamed for under-insuring their buildings, but it is only fair to recognise that the contention embodied in the "Report of the Houses of Laymen and Convocation," issued in 1913, deserves more attention than appears to have been obtained from the insurance companies. The omission of the "Average Clause" in all such policies was therein asserted as essential, and up to now this claim has been treated by the companies as an unwarranted demand. Churches vary much structurally and in location, some stand in the open, others on crowded sites. Each church, too, differs greatly in its own parts so that the same risk and value cannot be justly averaged save by pre-arranged appropriation. We suggest that screens, pulpits, stalls and other fittings as well as the contents, such as vessels, vestments, pictures, and the like, ought to be scheduled and provisionally priced at agreed values with proportionate premiums, reckoning the fabric at a far less valuation subject to specific exceptions, such as each case may demand. Insurance risks can only be covered by actuarial calculations, but on the other hand church councils are not financially positioned for heavy insurances. Some such scheme thus outlined would, in the majority of cases, enable them adequately to meet fire risks and at the same time justify insurance enterprise by fixing it on a more mutual basis.

British Museum Lectures. In the most recent of her lectures at the British Museum, Miss Claire Gaudet, in describing the methods of building, told us that the Egyptians built from the outside inwards as the best way of keeping out the sun; and of the effects of climate on the form of building, as in the flat roof in the East, which is also used as a sleeping place. For the building of the Pyramids, the labourers floated the granite down from the quarries on rafts and then dragged it on rollers up the great causeway leading to the Great Pyramid, of which traces still exist. The view that the Pyramids were built entirely by slave labour is regarded as incorrect. Each year for three months most of the cultivated area was flooded, at which period the agricultural labourers were out of work, and during this enforced inactivity they were employed in other directions. The chief buildings in all ancient civilisations were the temples, tombs and palaces, and at that time the royal palace sheltered all the machinery of government and of commerce which centred there.



Ruins of Cloth Hall, Ypres; Consolidation Work in Progress.

Strand-on-the-Green, Chiswick. The recently-erected rubble wall along the river side at Strand-on-the-Green, towards the western end near Kew Bridge, has now been made to conform to the wishes of the Art Standing Committee of the R.I.B.A. by the addition of a wide stone splayed top coping, well weathered and projecting each side, by which means the random rough stone wall is made less conspicuous. By raising the walk along this extremity of Strand-on-the-Green the wall in question is almost entirely hidden. The remainder of the Strand walk remains as it was, and the R.I.B.A. has thanked the Chiswick Council for the consideration shown to the Institute's wishes. Those who value the amenities of the Thames will be glad to know that this part of the river is for the present safe from spoilation.



Hotel de Gand, Ypres, as restored. (*See p.* 800.)

GENERAL NEWS.

Professional Announcement.

Mr. George A. Allan, M.S.A., and Mr. L. W. E. Foster have removed to 5, Staple Inn, W.C.1. (Telephone: Holborn 4586.)

Appointment.

The Burry Port U.D.C. has appointed Mr. J. E. Vaughan Evans, Llanelly, as its Surveyor.

Rome Scholarship in Architecture.

In the list of names of those granted permission to take part in the Preliminary Competition for the Rome Scholarship in Architecture and the Henry Jarvis Studentship, 1924, given in our last issue, it was not clearly stated that Mr. Towndrow, Mr. Sisson and Miss Hargroves are students of the London University School of Architecture.

City Churches.

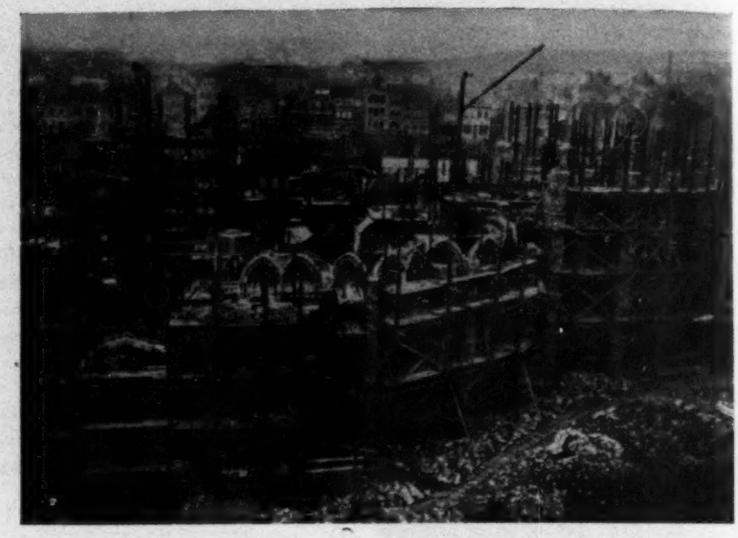
At a full session of the Church Assembly, held on November 17, the question of the City churches was discussed. Lord Robert Cecil said that the members in charge did not propose that the Assembly should come to a definite decision at the present session. Therefore, the matter was at present in abeyance.

Old Dutch Work in South Africa.

The Cape Institute of Architects have sent a portfolio of measured drawings of old Dutch work in South Africa for inspection by the R.I.B.A. Board of Architectural Education. The drawings were submitted in competition for the Cape Institute of Architects' Measured Drawings Prize. The Board of Architectural Education were impressed with the high standard of the work and Professor C. H. Reilly, a member of the Board of Architectural Education, has written an appreciation of the drawings.

Church Building Society.

At the monthly meeting of the Incorporated Church Building Society, held at 7, Dean's-yard, Westminster, on November 15, grants were made towards building new churches at Leicester, The Holy Apostles, £300; Newport, SS. Julian and Aaron, Mon., £300; Abercarn, St. Luke, Mon., £250; East Boldon, St. George, Durham, £125; rebuilding the churches at Brecon, St. David, £200; and Kidderminster, St. George, £75; and towards enlarging or repairing the churches at Barnwell Abbey, Cambridge, £40; Cheselbourne, St. Martin, Dorset, £40; Cold Waltham, St. Giles, Sussex, £50; Haggerston, St. Paul, £75; Ilton, St. Peter, Som., £50; Leintwardine, St. Mary, Hereford, £50; Nurstead, St. Mildred, Kent, £25; Orby, All Saints, Lincs., £30; Over, St. Chad, Cheshire, £70; Pensnett, St. Mary, Staffs., £100; Ruishton, St. George, Som., £50; Southwark, St. Peter, £50; Thorpe, St. Mary, Surrey, £15; Great Walsingham, St. Peter, Norfolk, £50; and Worthen, All Saints, Salop, £100. A grant of £100 was also made from the Mission Buildings Fund towards the erection of a Mission Church at Cefn Cribbwr, Penyfai, Glam. The following grants were also paid for works completed at Petham, All Saints, Canterbury, £25; Acton, All Saints, Suffolk, £50; Islington, St. Matthias, £100; West Thurrock, St. Clement, Essex, £15; Ford End, St. John, Essex, £40; Blackburn, The Saviour, £175; Ruishton, St. George, Som., £50; Bream, St. James, Glos., £20; Lannarth, Christ Church, Cornwall, £40; Abington Pigotts, St. Michael, Herts., £25; Thorpe, St. John the Divine, Yorks., £150; and Cwm Mission Church, Bettws-y-Coed, £35. In addition to these the sum of £630 was paid towards small repairs to 30 churches from Trust Funds held by the Society.



Cathedral of St. Martin, Ypres, under re-construction, November, 1923. (*See p.* 800.)

"Old London."

In aid of the Widows' Friend Society, a lecture, illustrated by lantern views, on "Old London," will be delivered by Mr. Herbert A. Cox, F.C.A., on November 29, at 5.30 p.m., in the Bishopsgate Institute, 230, Bishopsgate, E.C.2. Mr. A. C. Stanley-Stone, C.C., will occupy the chair. The lecture will be illustrated by lantern slides of old London and a model of Old St. Paul's (illuminated by electricity). Tickets (free of tax) 2s. 6d. (numbered and reserved) and 1s. 3d. may be obtained at 4, Catherine-street, Aldwych, W.C.2.

COMPETITION NEWS

Hereford.

The Hereford City Council has decided to offer prizes for drawings and plans for the rebuilding of the Hereford Butter Market, and for the full development of the city on commercial lines.

New Art Gallery, Hull.

In this competition, Mr. John W. Simpson, P.P.R.I.B.A., the assessor, of London, has made the following award:—

First premium (£1,000), Messrs. S. N. Cooke, F.R.I.B.A., & E. C. Davies, A.R.I.B.A., 1, Montague-street, London, W.C. 1.

Second premium (£500), Messrs. J. S. Gibson & Gordon, 5, Old Bond-street, London, W. 1.

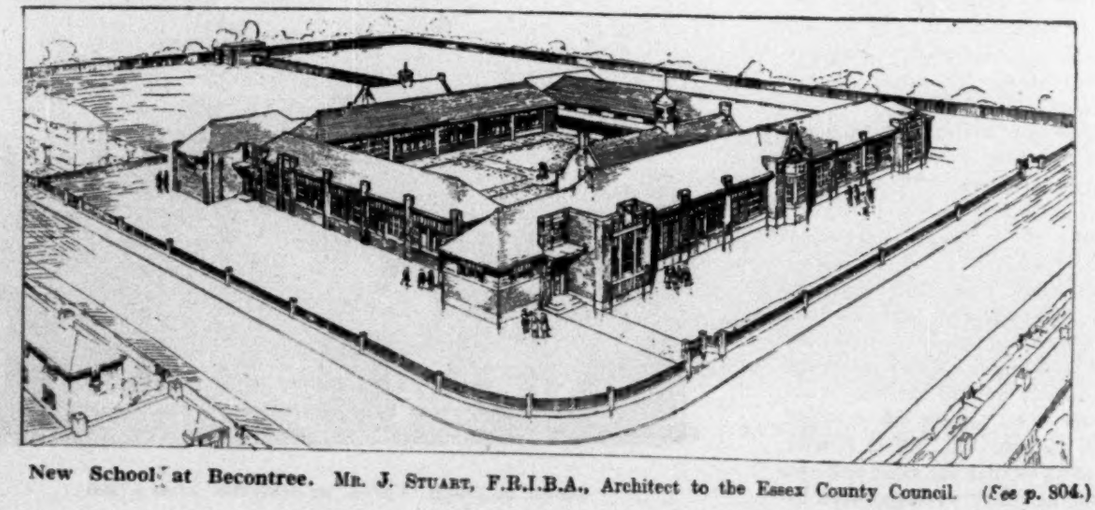
The first premiated design is given in this issue.

Barton-upon-Irwell.

The Guardians invite architects with experience in hospital planning to submit their names and qualifications. From these, twelve will be invited to submit designs. Mr. William A. Pite, F.R.I.B.A., is the assessor.

Other Competitions.

Other competitions still open include the following (the dates given are, first the sending-in date, and second the issue of *The Builder* in which full particulars were given):—Singapore College (Jan. 1, 1924; March 30) Dudley Memorial (Jan. 5, 1924; Sept. 14). Eastleigh and Bishopstoke Assembly Hall—*Banned by R.I.B.A.* (Dec. 3; August 24). Taunton War Memorial (Nov. 30; Oct. 5). Memorials to the Missing (Jan. 1, 1924; Aug. 3). Newcastle Concert Hall (Feb. 1, 1924; Oct. 26). British Empire Exhibition Decoration (Dec. 17; Oct. 26). Essays on Concrete (Dec. 31; Nov. 16). Edmonton War Memorial (Nov. 26; Nov. 16). Belfast Union Heating and Lighting (Dec. 18; Nov. 9). Essays on Heating and Ventilating (Mar. 31, 1924; Nov. 9). Bristol Police and Fire Station (Dec. 18; Nov. 9).



New School at Becontree. MR. J. STUART, F.R.I.B.A., Architect to the Essex County Council. (*See p.* 804.)

CORRESPONDENCE.

[While we are glad to publish letters on professional and other matters of interest to our readers, it must be understood that we do not necessarily endorse the remarks of correspondents, who will oblige us if they will express their views as briefly as possible.]

"Charlatans and Pests."

SIR,—The first part of Mr. Overy's letter is an argument in favour of placing the architectural profession on a similar footing to that of the medical profession, an objective which the Society has for many years endeavoured to reach and which it will undoubtedly attain in due course with the support of Mr. Overy and other members of the Society and of the profession.

Mr. Overy seems to base his assumption that the letters designating membership in the architectural bodies convey little to the man in the street on a kind of general knowledge test which he has imposed on some of his friends, but the fact that they have failed to qualify does not necessarily imply that other people are equally ignorant. Mr. Overy's friends' better acquaintance with the letters designating membership in bodies representing other callings is due, it is suggested, to the fact that those who practise these callings are able to make them known through the medium of newspaper advertisements, and he appears to have a grievance because architects belonging to the representative architectural bodies are debarred from advertising in a similar way. A little reflection will show Mr. Overy that there are many legitimate and better ways in which architects may secure publicity if they wish to do so, without infringing any written or unwritten code of professional ethics. He has himself adopted a method which I also advocate, viz., that of press publicity under his own name. If Mr. Overy does no more than glance at the daily papers and the professional journals he cannot fail to be impressed with the fact that some of the leading architects are adepts in the art of professional publicity in the Press. There are also other means by which an architect may keep himself before the public, and far from being handicapped by restrictions in regard to professional publicity, the architect is in a position, by the nature of his profession, to command much of the publicity which those carrying on some other callings endeavour to secure by advertising.

Mr. Overy concludes his letter with a somewhat confused reference to a body which does not exist. He says it is interesting to note what this body is doing for its members in various ways, and then goes on to complain that it is not doing anything. Incidentally, he suggests an excellent title for whichever of the architectural bodies first becomes the one and only representative body of architects in the Kingdom. I hold no brief for an imaginary body, but as Mr. Overy is in municipal employ he will be pleased to hear that long ago the Society which has the advantage of his support as a member circularised all the local authorities in the kingdom, urging that architects should be placed in charge of their architectural work, and more recently in connection with the National Housing Scheme it has at least twice circularised the same authorities, urging them to employ architects on housing schemes and offering to supply the names of the Society who would carry out the work if the bodies concerned had any difficulty in finding an architect. So successful was the Society's propaganda that it was accused, by a leading member of a kindred institution in his address, of unprofessional conduct in what was alleged to be an endeavour to get the housing work out of the hands of other officials of local authorities. In addition to this general propaganda the Society is frequently in correspondence with individual municipalities and public departments with a view to safe-guarding the interests of its members.

In case it may be supposed that Mr. Overy, as a member of the Society, should necessarily be acquainted with the Society's past movements in the directions indicated, it seems only fair to him to say that he is comparatively a new member and one to whom the Society is much indebted for his support and for this opportunity of offering some observations on the subject matters of his letter.

C. MCARTHUR BUTLER,
Secretary.

Society of Architects.

King's College New Buildings, Cambridge.

SIR,—As one interested in architecture, I beg leave to write to you on the subject of the proposed new buildings at King's College, Cambridge. Last week I was in Cambridge, and took the opportunity to inspect the designs. As examples of architectural taste they were particularly bad, and my sympathies went out to the assessor, who had no alternative but to select the least offensive of the works. No doubt before the buildings are started the College authorities will ask for some revision of the elevations.

"STAT HOMINUS UMBRA."

SIR,—In your issue of November 16, I observe that a letter appears with reference to the recent competition for the new buildings for King's College, Cambridge. The letter, which is signed by three of the unsuccessful competitors, Mr. T. S. Tait, Mr. G. H. C. Holt and Mr. V. O. Rees, impugns the competence of the assessor, Mr. C. Lovett Gill, censures the Building Committee of King's College for endorsing his award and accuses the winners of violating the conditions of the competition. It is incidentally a document that bears a curious and interesting likeness to the anonymous criticism of the competition that appeared in a contemporary journal for November 14, and that included special praise of the work of one of the signatories of the letter.

The attack on the assessor and on the Building Committee of King's must under the circumstances appear extraordinarily unsportsmanlike—to use an English phrase. If defeated competitors cannot take their beating in a more generous spirit, they should at least refrain from a public display of their chagrin, and not rush into print with suggestions that a lay committee ought to have refused to endorse the award of a Fellow of the Institute, and that the longer the successful design is studied the more dubious about it the Building Committee of the College must feel.

Questions of professional conduct are here involved that would seem to demand the attention of the Practice Standing Committee of the Institute. If nothing is done to impose some reasonable standard of loyalty and etiquette in competitions the prestige of the profession must be seriously damaged.

C. H. REILLY.

Liverpool.

"The Problem of London Traffic."

SIR,—Listening with great interest to Sir Lynden Macassey's review of the above subject at the School of Economics, I could not help being confirmed in an opinion held for a long time that it would be to the interest of the community were the late Royal Commission on London Traffic Improvement reconstructed with extended reference and powers, in order to bring the report up to date.

Appointed in 1903, it presented in two and a half years a most elaborate work, extending to eight volumes and costing the nation about £80,000. The subsequent expenses of its successors, the London Traffic Board and Ministry of Transport, must have about doubled that expense, so that it is safe to say that in two decades £150,000 has been spent *officially* in inquiry and suggestion.

Great changes have occurred since the Royal Commission reported motor traffic was in its infancy, aircraft in swaddling bands; the war wasn't dreamt of, nor the vast changes that have come as the aftermath.

Moreover, one government after another, both before the war and since, have been baffled as to the best course to pursue in the interpretation of the Commission's report, or inaction in regard to the subject generally, which, it ought to be recognised more fully, is bound up with "London Government," on which a somewhat abortive report has appeared recently.

The Commission did not look upon its report as the last word on the subject. On the contrary, it spoke of the hope of "a well-considered plan" being produced. Up till now it hasn't appeared, but any number of piecemeal suggestions await investigation from which it is believed the desired plan can be made up.

If that is not done, there is the danger of the Metropolis becoming the subject of further botch—in fact, it is imminent.

O.B.I.T.

Town Planning in Kent.

A meeting of the East Kent Regional Joint Town-Planning Committee was held at the Guildhall, Canterbury, on Monday with representatives of the local authorities concerned, under the chairmanship of Mr. A. P. Rice. A motion by the Mayor of Dover was proposed, to approach an eminent town-planning expert with a view to preparing a regional outlying scheme and report, and the name of the President of the Town Planning Institute was mentioned. A feature of the Town-Planning Exhibition opened at Olympia, as part of the Commercial Motor Exhibition, is a large number of models demonstrating town-planning schemes, lent by Birmingham, Glasgow, Manchester, Liverpool, Leeds, and other large corporations,

Semi-Permanent (brick and wood) Workmen's Dwellings at Ligy Garden Suburb, near Ypres. (*See p.* 800.)

THE ROYAL INSTITUTE OF BRITISH ARCHITECTS

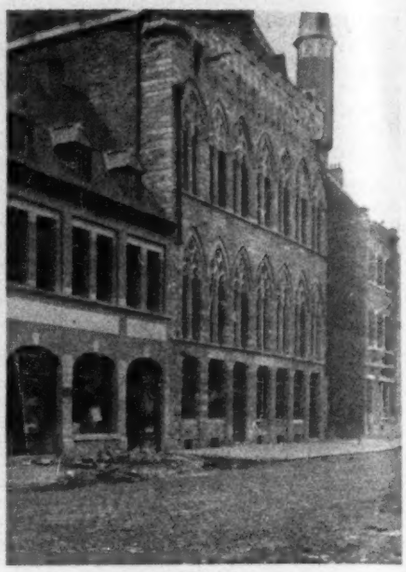
THE REBUILDING OF YPRES.

MR. G. TOPHAM FORREST, the chief architect to the London County Council, delivered a lecture on Monday, at the Hall of the Royal Society of Medicine, on the subject of the "Rebuilding of Ypres." The chair was taken by Mr. J. A. Gotch, the President of the Royal Institute of British Architects.

The lecturer said that at the end of the war the devastation of Ypres was so complete that it looked as if the town was destined to be a great silent mound—a pathetic token of the struggles of the British Army on Belgian soil. Fortunately neither the Belgian people nor their rulers shared that view, and at the present time the ruins were being rapidly transformed into the Ypres of pre-war days. In addition to the town of Ypres nearly two hundred and fifty communities in Belgium suffered greater or less devastation, and all over the country incalculable injury had been done to the roads, railways, telegraphic and telephonic installations, waterworks and canals, and as soon as the capital was re-entered, the Belgian Government announced that one of the first duties of the country was to consecrate the national energy and resources to the task of helping the devastated regions to make good their enormous losses. Ypres, which among all the ruined districts was the one which had suffered most from the devastations of war, was, with Louvain and Dinant—those other great Belgian sacrifices—among the first communities to benefit from this special law. About the middle of 1919 it was, as it were, adopted by the nation, and from this fact was assured of the technical and financial assistance of the State and of those organisations specially created to assist in the prompt re-establishment of the country. Important provisional arrangements were at once made for housing the necessary public services and the first repatriated inhabitants. Great huts were erected to shelter the various public services. The task was at this time most difficult, for means of communication, railways, waterways and roads, had totally disappeared, transport failed and labour especially was lacking. The work was, nevertheless, carried on rapidly, and in a few months quite a small town of nearly 1,000 huts was built in the neighbourhood of the site of the vanished town.

The major part of this temporary village still exists and will only disappear on the completion of the reconstruction works, for it shelters a great part of the working population gathered from all parts of the country for the purpose of rebuilding the town. But the building of this village of huts, however urgent it was, and however difficult it might have been to achieve, was, after all, no more than a preliminary and only a small thing compared with the work—with even the preparatory work—still to be done. Those who did not see the ruins on the morrow of the armistice, or during the months immediately following can form no idea of the labour and energy required to render the reconstruction possible. The masses of ruins, fallen in disorder, had obliterated almost the very trace of the streets; in most parts the destruction was so complete that the foundations even had disappeared. And the formidable task to be undertaken was further complicated by the fact that it had to be carried out with due regard to the past history. There was no question here of founding a new town on virgin soil, but of rebuilding an ancient city out of its own ruins, and on its ancient site, exactly as it had been handed down from long past generations. The devoted zeal of the authorities and services, therefore, was bent on the patient and methodical clearing of the ruins, on the classification of the recovered materials, on the slow and laborious search for traces of the town's communications, on the patient uncovering of the water services and sewers, both destroyed and dispersed underground. The task called for weary months of self-denial and goodwill, and more than 4,000 workmen were engaged on it unceasingly up to the beginning of 1921, and it was only then that it was sufficiently advanced for a first beginning to be made on actual building work. From this time, the heaviest part of the work having been completed, and the prospect of final victory in sight, restoration work of every kind marched with giant strides, and wondering admiration was felt at the marvellous sight of the city being re-born and already almost reconstructed. The question of deciding whether to reconstruct all the buildings or to preserve the more important ruins as a witness to the horrors of the Great War, gave rise to much controversy. It had been thought by many that the ruin of the Cloth Hall and of St. Martin, especially, should be retained in their impressive grandeur. The question as regarded the Cloth Hall had not been definitely decided. Up to the present in Belgium the financial question had dominated the whole problem, and the authorities wisely decided to devote the funds available to reconstructions of immediate utility. It was, however, to the reconstruction of private dwelling-houses—as the following table shows—that the authorities have specially devoted themselves, and what was only some three years ago an immense field of desolation and death, was to-day a vast workshop in full activity where homes were already rising by hundreds with a rapidity which shows a daily progress.

No. of houses: before the war, 3,780; destroyed, 3,780; left on December 31, 1918, 0. Situation at the end of September, 1923:—Dwellings: inhabited, 1,500; fit for habitation, 200; in course of reconstruction, 789 temporary buildings, &c., 750; Total number of dwellings, 3,239.

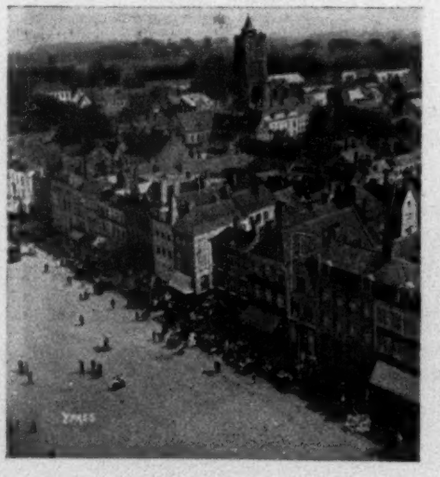


Post Office (known as Templars' House), Rue de Lille, Ypres, as restored: March, 1923.

As regards State intervention of the 2,489 dwellings rebuilt, or being rebuilt, there were:—Buildings reconstructed by the Government (department of devastated regions), 1,009; new buildings constructed by the State (working-class estates of Kalvaart and Ligy), 239; buildings reconstructed by means of administrative advances agreed by the department of devastated regions, 491; buildings reconstructed by war victims as a result of judgments by the war damage tribunals, 750—total 2,489.

The rate of progress in the carrying out of the work may also be realised from an examination of the figures relating to the population of the town at various dates:—No. of inhabitants: before the war, 18,056; on December 31, 1918, 0; on December 31, 1919, 2,126; on December 31, 1920, 5,871; on December 31, 1921, 9,450; on June 30, 1922, 10,465; on September 30, 1923, 13,053.

It should be realised, however, that not all the buildings, without exception, had been reconstructed exactly as they were before the war. There were at Ypres, as in most of the destroyed localities, certain working-class districts in which there was a number of old buildings, the reconstruction of which would have been neither possible nor de-



1912.

November, 1923.

Views taken from the Belfry of the Cloth Hall, Ypres

sirable, but which had to be replaced in order to meet the industrial needs of the town. The Government realised this, and devised a most interesting scheme embodying the construction, in place of the numerous little houses destroyed, of several hundred working-class dwellings.

The lecturer also said that he had found it exceedingly difficult to discover the names of those actually responsible for the carrying out of the work, but he specially referred to State Minister Renkin, Mr. R. Verwilghen (formerly director of the department of devasted regions), Mr. J. Coomans (architect-engineer of the town of Ypres), and Mr. Carl Verwilghen.

The lecturer had no doubt whatever but that the Cloth Hall would be restored. The cathedral of St. Martin's was, actually, being restored.

Having described the actual work of restoration, he told of the almost religious care that was being taken of every piece of old work in the restoration of the buildings. He also referred to the energy displayed by all classes of workers, and expressed the hope that when the Cloth Hall has been rebuilt, a tablet would be erected on its wall recording the fact that "The people had a mind to work."

The lecture was illustrated by eighty lantern slides showing Ypres as it was before the war, as it was immediately after the war, and as it is to-day.

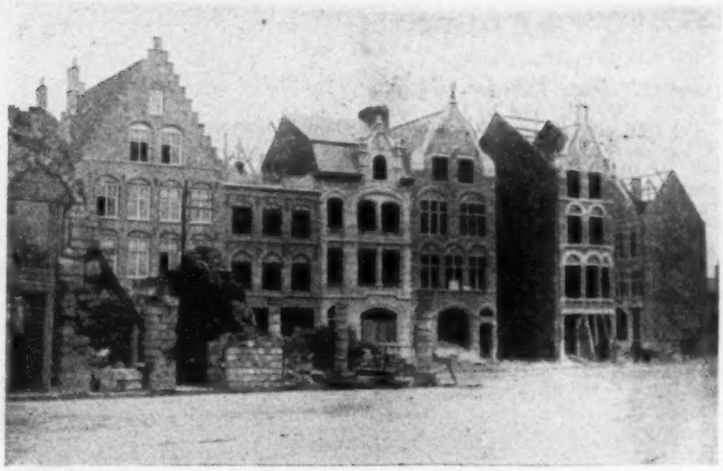
The Earl of Cavan (Chief of the Imperial General Staff) said he sincerely and heartily moved a vote of thanks to the lecturer. He did not know which emotion stirred him the more—sorrow or anger at the damage which the Germans had accomplished, or admiration for the faith of the Belgians in rebuilding Ypres. In regard to his own memories of Ypres, he regretted the lecturer had made no mention of the ancient ramparts. They had proved absolutely safe against shell-fire, and even against gas. They had been the headquarters of many brigades and divisions during the war. The hospital, he recalled, had often sheltered his own motor-car. In conclusion, he congratulated the Belgians on their work, and said that he doubted if many other countries would have brought it to successful fruition.

The Belgian Ambassador, in seconding the vote of thanks, mentioned the very ruins of the city proclaimed the valour of Great Britain, which had stayed the rush to the West. He was confident that Ypres would once again be a smiling town, but it would ever be a place where dwelt the memories of heroes. It represented sanctuary which bound a grateful Belgium to Great Britain.

The French Ambassador spoke of the tenacity of the Belgian people, and their confidence in the future. He mentioned that they served as an example for the rest of the world in the effort of reconstruction.

Chadwick Trust.

In consequence of the General Election, the Chadwick Public Lectures, by Major Harry Barnes, V.P.R.I.B.A., and Dr. A. K. Chalmers, D.P.H., are being postponed until the New Year.



Grande Place, Ypres: March, 1923.

THE ROYAL INSTITUTE OF BRITISH ARCHITECTS

THE following are notes from the Minutes of the November 5 Council Meeting:—

The City Churches.—It was decided to issue a public protest against the threatened demolition of City Churches.

Preservation of Places of Natural Beauty or Historic Interest.—It was decided to join the Royal Academy, the Society for the Protection of Ancient Buildings and the Society of Antiquaries in sending to the Chancellor of the Exchequer a proposal for exempting the owner of any places of natural beauty or of historic interest from Schedule A of the Income Tax chargeable upon that property, provided that he keeps the property in such repairs wil prevent decay and allows reasonable access to members of the public who wish to enjoy the beauties of the place or to appreciate its historic interest.

Royal Commission on Fire Brigades and Fire Prevention.—It was decided to appoint a joint Committee of Members of the Practice and Science Standing Committees to collect and collate reports from the Allied Societies on the Report of the Royal Commission on Fire Brigades and Fire Prevention and to advise the Council as to any steps which it may be desirable to take in connection with the Report.

Lay out and Town-Planning Competitions.—It was decided to take steps to arrange an early conference of representatives of the Town-Planning Institute, the Town-Planning Committee R.I.B.A., and the Competitions Committee R.I.B.A., to consider and report to the Council R.I.B.A. upon the whole question of Town-Planning and Lay-out Competitions.

Illegal use of R.I.B.A. affix.—It was decided to publish a note annually in the R.I.B.A. Journal and the professional press calling attention to the fact that the use of the R.I.B.A. affix, or of any affix suggesting membership of the R.I.B.A., by those who are not members of this body, is illegal, and that if any cases are reported to the Council legal proceedings will be taken.

The Charter and Bye-laws Committee.—Mr. Maurice E. Webb was appointed as an additional member of the Committee.

Road Access to the London Docks.—It was decided to communicate with the Port of London Authority and the Minister of Transport to the effect that the Royal Institute is glad to note the probability of the above improvement, and will be glad to be assured that the work is likely to be proceeded with during the winter.

Undercutting of Fees.—Under the provisions of Bye-law 24 a member was severely censured for quoting fees lower than those prescribed by the R.I.B.A. Scale in competition with other architects for an appointment under a public body.

Competitions.—A Licentiate was expelled for taking part in a banned Competition.

R.I.B.A. Examinations:—

(A) *Probationership.*—It was decided to accept Chemistry as an alternative to Physics, Mechanics, or Higher Mathematics in the qualifications for the Probationership.

(B) *Town Planning.*—It was decided to institute a special Examination for members of the Royal Institute leading to a Diploma in Town Planning.

(C) *Final Examination.*—The Board of Architectural Education reported to the Council that the following Students of Recognised Schools exempted from the Final Examination had passed the Examination in Professional Practice: Donald Brooke, Isabel M. Chambers, J. A. Coia, George H. Crickmay, James D. Ferguson, E. Maxwell Fry, Edith Gillian Harrison, E. H. H. Higham, Harold Hirst, C. H. Hutton, C. G. C. Hyslop, C. R. Knight, Doris Musker, Mohammed Raafat, T. Scott Sutherland, R. W. H. Vallis,

(D) *R.I.B.A. (Archibald Dawnay) Scholarships.*—The Board of Architectural Education reported to the Council that the following awards had been made: One Scholarship of £50 per annum to Mr. R. W. Donaldson, Liverpool University; one Scholarship of £25 per annum to Mr. R. H. Turner, Liverpool University; one Scholarship of £25 per annum to Mr. A. E. Cameron, Architectural Association; a renewal for the year 1923–1924 of the Scholarship of £25 awarded in 1922 to Mr. C. H. Hutton.

(E) *R.I.B.A. (Henry Jarvis) Studentship at the Architectural Association.*—The Board of Architectural Education reported that they had approved the award of the Studentship of £50 to Mr. Arthur Edwin Cameron.

Membership.—(A) The nominations of 21 candidates for the Fellowship and 30 for the Associateship were approved.

(B) Mr. F. E. F. Bailey (elected Associate 1879, Fellow 1905) was transferred to the Retired Fellowship.

Houses at Ypres: January, 1922.

FACTORY DWELLINGS, VÄSTERAS, SWEDEN.

By GEORG BROCHNER.

The General Swedish Electric Company's factory is from the designs of M. Eric Hahr, while M. Fritz Söderbergh, civil engineer, and some of the company's own engineers are responsible for the interior construction and arrangements. The building of this huge factory necessitated the acquirement of additional extensive areas from the city, including a couple of streets, and the part of a stream, 600 ft. long, which had to be filled up and sewers constructed in its place.

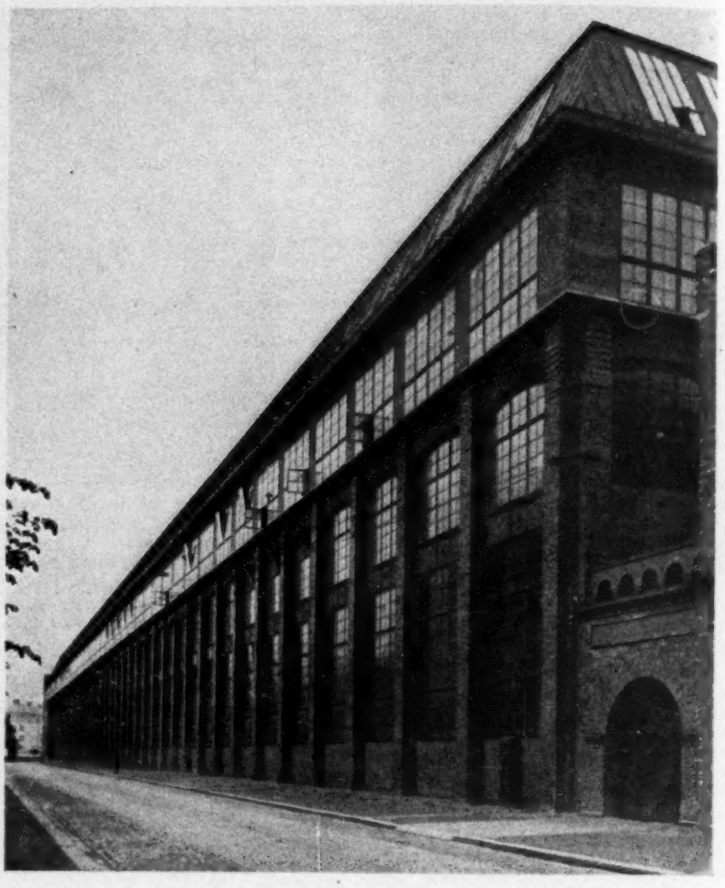
The foundation presented some difficulties, and concrete piles had to be carried to a depth of 24 ft. The front of the main building has a length of 113 metres. The height of the building is 25 metres, and its depth 20.5 metres. The building covers an area of 3,000 square metres, and contains a floor area of 12,000 square metres. The main front building has four stories, and the wing five. The height of the ground floor is 7 metres, of the first and second floors 4.5 metres, and for the upper floor, where the windows are in the roof, 8 metres.

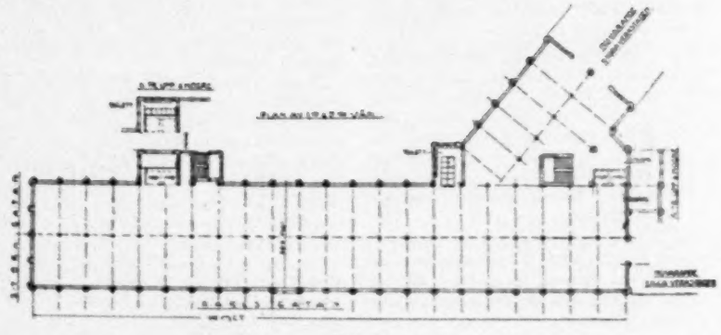
The main structure is entirely of steel. There is a heavy concrete pillar under each brick pillar, connected by reinforced concrete beams. The pillars of the walls are covered with brick, and these constitute the frontage. The floor of the ground floor is of concrete covered with asphalte. Other floors are of concrete, covered with asphalte or wood, according to requirements. The load for the ground floor is calculated at 3,000 kilograms, for the first floor 2,000 kilograms, for the second 1,500 kilograms, and for the top floor 1,000 kilograms per square metre. The pillars on the ground floor support two parallel traverses; the load on the central pillars of the ground floor is about 300,000 kilograms, and a little less for the outer pillars. The fact of there being only one interior row of pillars gives better light, more room, and allows the traverses to be used in either side.

The window space occupies more than three-fourths of the walls, and they have been made as high as possible. The traverse arrangements have necessitated the stairs, which are broad and light and of reinforced concrete, being placed in special side buildings, where are also the elevator shafts, lavatories, &c. There are four elevators, each of 3,000 kilograms capacity; each elevator accommodates 20–30 persons, but during working hours they are intended for handling of goods.

The company has been its own builder, where necessary employing some special firms; but the entire steel construction was made at its own works and all the woodwork by a branch establishment. The building is heated by steam.

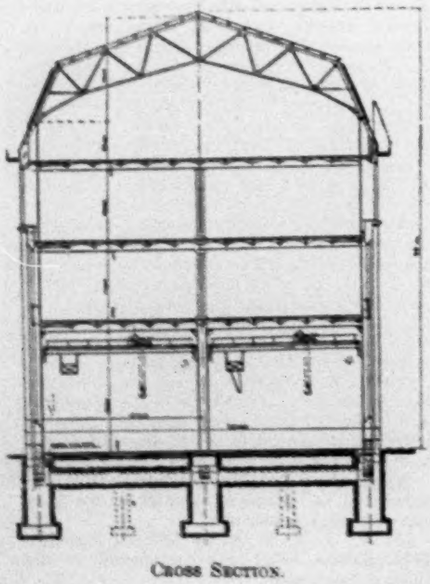
We illustrate a square of workmen's dwellings built by the company, and at very favourable rents let to the men. It is to the credit of Swedish workmen that they much appreciate a good house, which is almost invariably kept in good order, and the managing director of the S.G.E. Co., Mr. Edström, is much interested in providing good residential conditions for his men.





PLAN.

Works of the Swedish General Electric Co., Vasteras, Sweden.



CROSS SECTION.

Cost of House Repairs.

In the House of Commons last week, Sir Wm. Joynson Hicks, replying to Mr. Rhys Davies, said that the cost of repairing houses erected by a local authority under the Housing, Town-Planning, &c., Act, 1919, was defrayed from their Repairs Fund, to which was normally allocated 15 per cent. of the rents of the houses. The returns of several of the larger authorities showed that the average annual expenditure on repairs per house had been 5s. 2d.

MEETINGS.

SATURDAY, *November* 24.

London Association of Builders' Foremen and Clerks of Works.—Annual Dinner. At Holborn Restaurant, W.C.1. 6.30 p.m.

MONDAY, *November* 26.

Architectural Association.—Mr. J. A. Gotch on "Value of Study of Old Buildings." At 34, Bedford-square, W.C.1. 7 p.m.

WEDNESDAY, *November* 28.

L.C.C. Central School of Arts and Crafts.—Sir Banister Fletcher on "The Parthenon." At Southampton-row, W.C.1. 6 p.m.

THURSDAY, *November* 29.

Edinburgh Architectural Association.—Professor Abercrombie on "Architectural Education in Town-Planning." 8 p.m.

Society of Antiquaries.—Mr. A. C. Fryer on "Monumental Effigies Made in Bristol in Mediæval Times (1240–1550)." At Burlington House, W.1. 8.30 p.m.

Workmen's Houses for the Swedish General Electric Co., Västeras, Sweden.

Offices of the Swedish General Electric Co., Västeras, Sweden. (*See p.* 802.)

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ILLUSTRATIONS.

Hull Art Gallery.

We give this week the design placed first, by Messrs. S. N. Cooke, F.R.I.B.A., and E. C. Davies, A.R.I.B.A., in the competition for the new art gallery at Hull. The full result of the competition is given on p. 798.

Manchester Masonic Temple.

The exigency of the Press and dependence on photography sometimes interfere with our plans, and we were unable to reproduce the fine interior of Messrs. Thomas Worthington & Sons' accepted design for the East Lancashire Masonic Temple at Manchester with the illustrations which we gave in our issue of October 26, but we now give it, and also the plans to a larger scale than was before possible. The interior graphically illustrates an important and admirable feature of the building.

Design for the Holt Line Premises, Liverpool.

We give this week the design submitted by Mr. Curtis Green, A.R.A., F.R.I.B.A., in the recent competition for new premises for the Holt Line. The selected design, by Mr. Arnold Thorneley, F.R.I.B.A., and Mr. Herbert J. Rowse, A.R.I.B.A., was given in our issue for October 12; and the designs submitted by Sir Edwin Cooper, F.R.I.B.A., and Messrs. Willink & Dod were given in our issues for October 19 and November 16 respectively.

Greenwich Baths Competition.

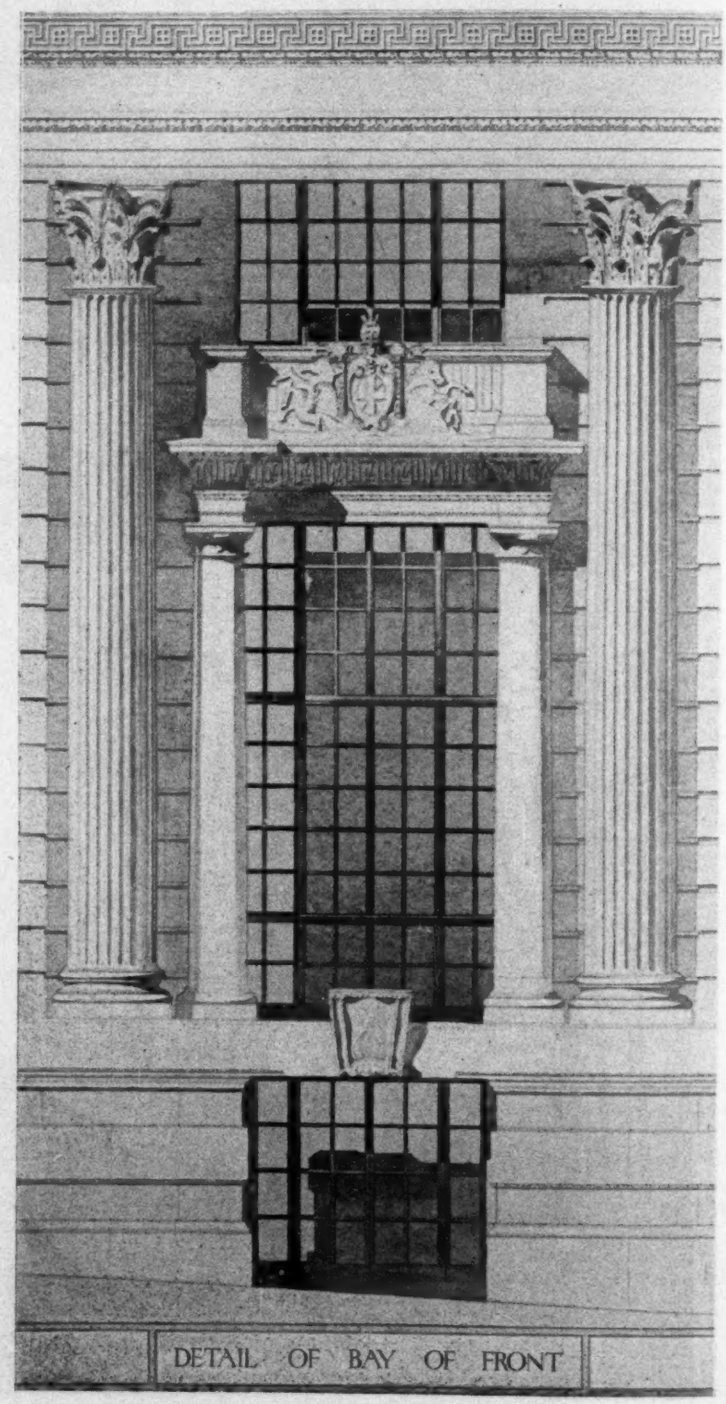
The design for Public Baths and Washhouses at Greenwich was submitted in the recent competition by Mr. R. Stephen Ayling, F.R.I.B.A. The designs placed first and second, by Messrs. F. J. Horth and H. Andrew and Messrs. Horace Field and Dighton Pearson, respectively, were given in our issue for October 12.

Proposed School at Becontree.

Until the advent of the London County Council housing scheme in the Becontree district, Dagenham (with the hamlet of Becontree) was a typical country village, noted chiefly from an architectural point of view for its ancient church of St. Peter and St. Paul, the chancel and aisle of which date from the eleventh century. In September, 1921, it was announced that the London County Council had arranged to erect 1,306 houses in the Romford section of the Becontree district, and to meet the demand for school places for the anticipated new child population (in addition to enlarging existing buildings) negotiations were opened with the London County Council by the Essex County Council Education Committee for the purchase of a site, about 2½ acres, upon which to erect an elementary school for 1,050 children.

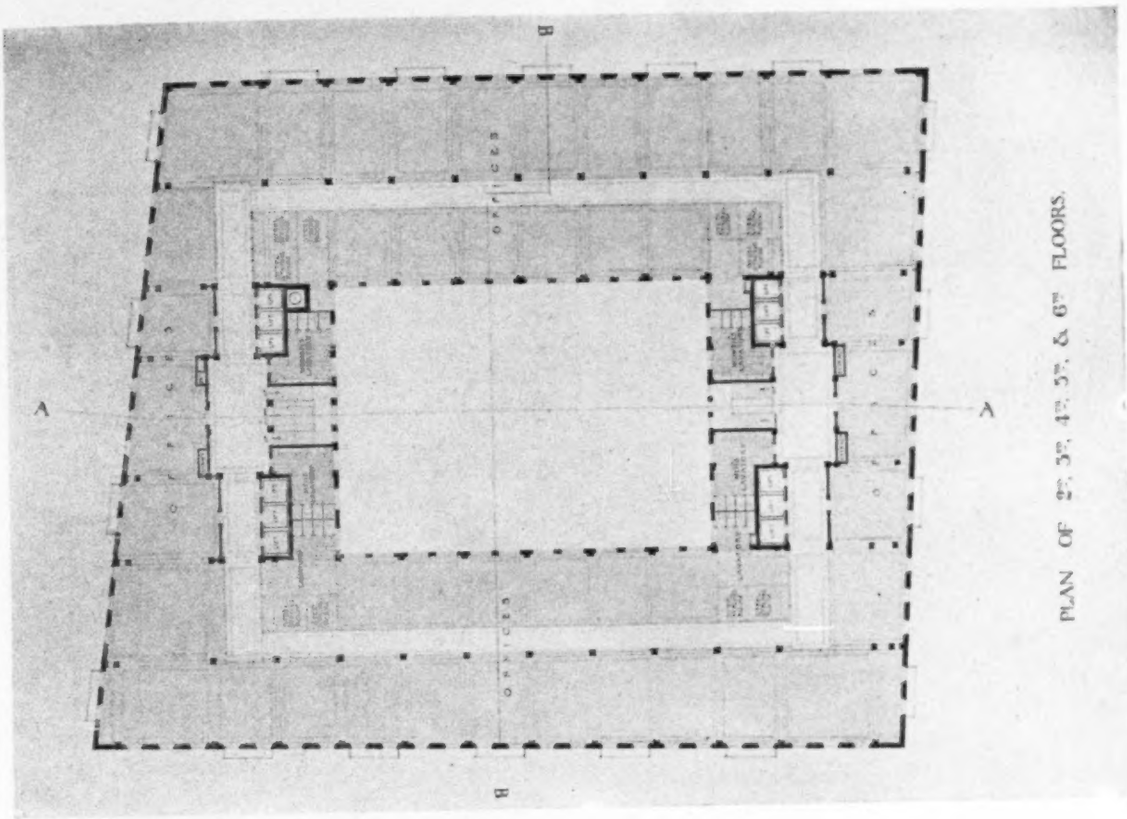
The new school consists of a quadrangular plan containing twenty classrooms for 50 scholars each, together with a babies' room for 50. All classrooms are cross-ventilated and are of the semi-open-air type. There are two assembly halls, together with the necessary cloakrooms and lavatory accommodation. For the juniors of each sex the offices are attached to the main block, whilst a separate sanitary block for older children is provided in the playground. Provision is also made in the plan for instruction rooms in woodwork and housewifery; staff rooms and offices for teachers of both sexes are included in the scheme.

The building is being erected of red brick with artificial stone dressings and tiled roofs. The heating arrangements are to be by low-pressure hot-water pipes and wall radiators. Artificial lighting will be by gas, there being no electric current available at present. The estimated cost of the buildings, based upon quantities and competitive tenders, is £22,588. The building is being erected by direct labour under the personal supervision of Mr. Jas. Stuart, F.R.I.B.A., the Architect to the Essex County Council.

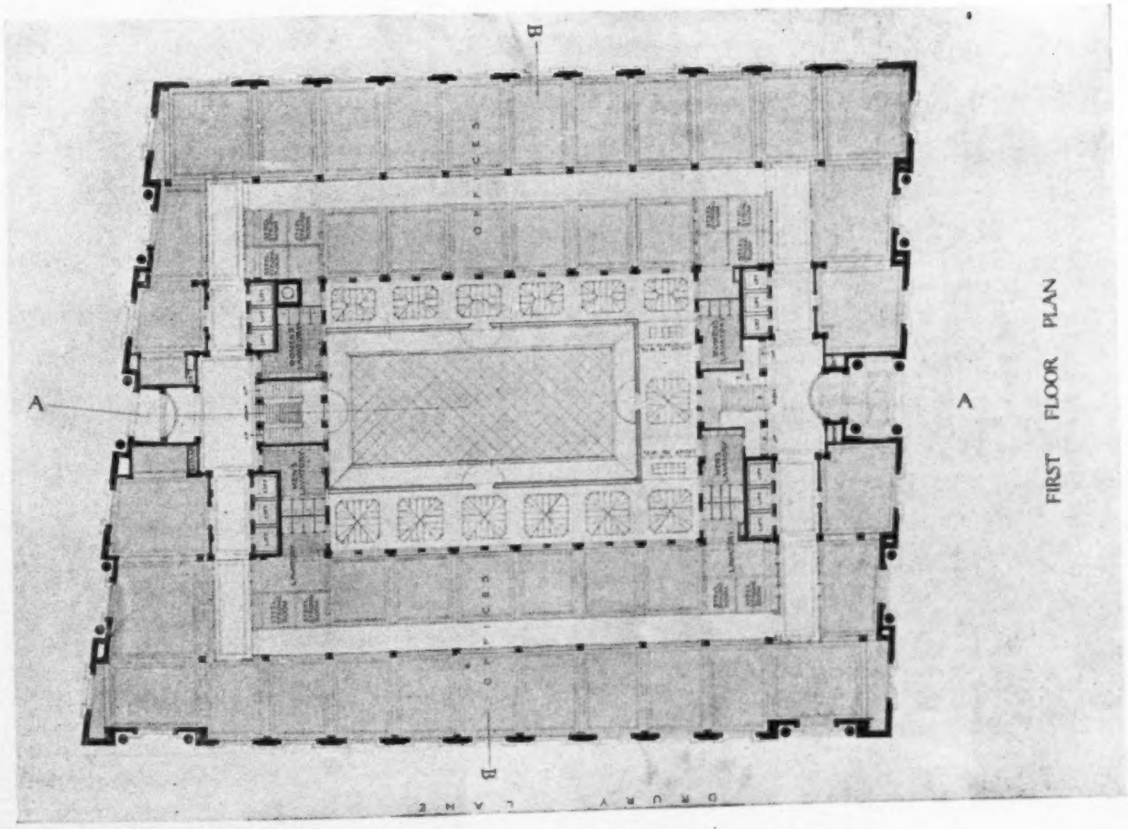


Design Submitted in the recent Competition for New Premises for the Holt Line, Liverpool.

By MR. CURTIS GREEN, A.R.A., F.R.I.B.A.



PLAN OF 2ND, 3RD, 4TH, 5TH, & 6TH FLOORS.



FIRST FLOOR PLAN

Design Submitted in the recent Competition for New Premises for the Holt Line, Liverpool.

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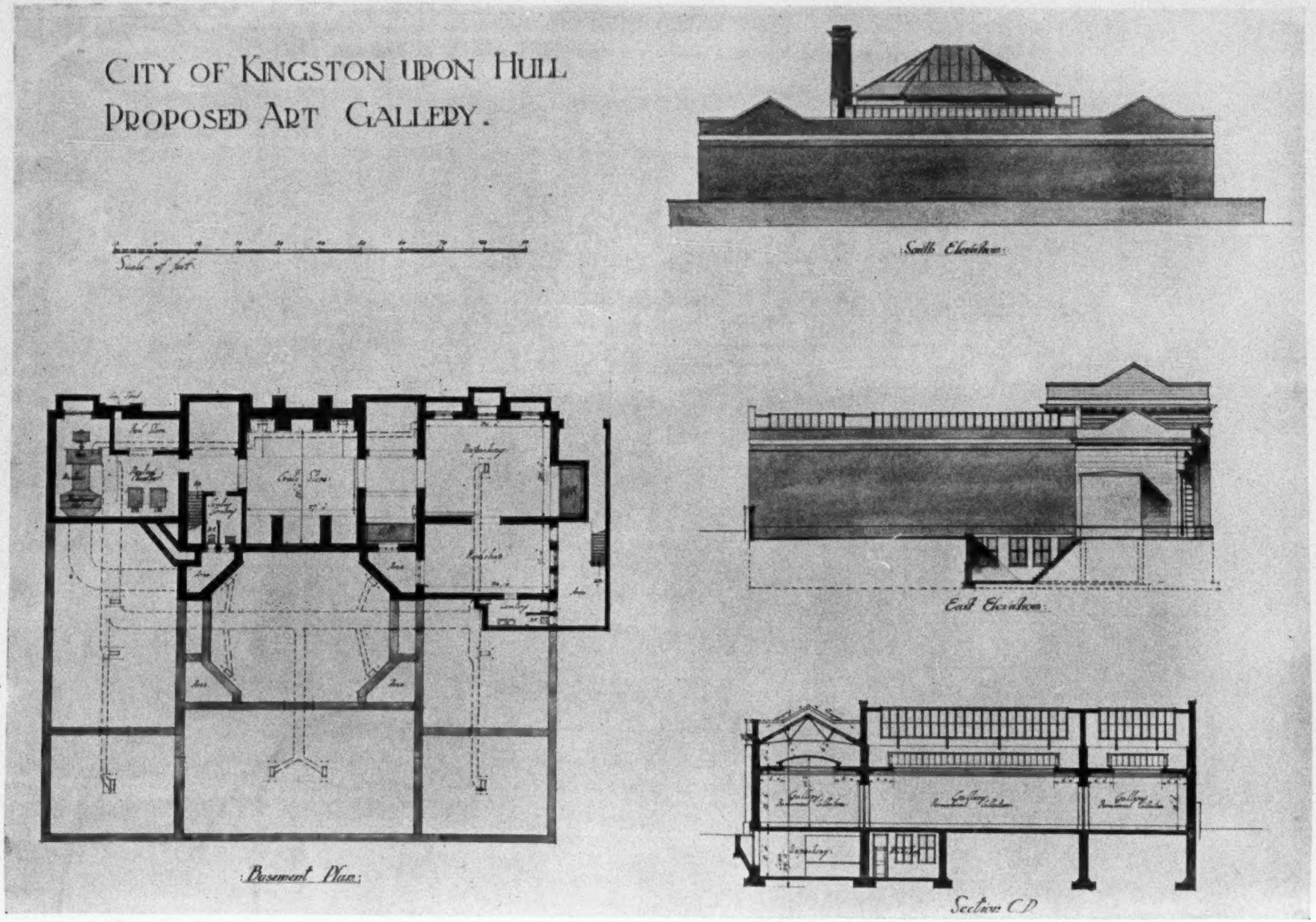

Hull Art Gallery Competition.

First Premiated Design: By MESSRS. S. N. COOKE, F.R.I.B.A., and E. C. DAVIES, A.R.I.B.A.

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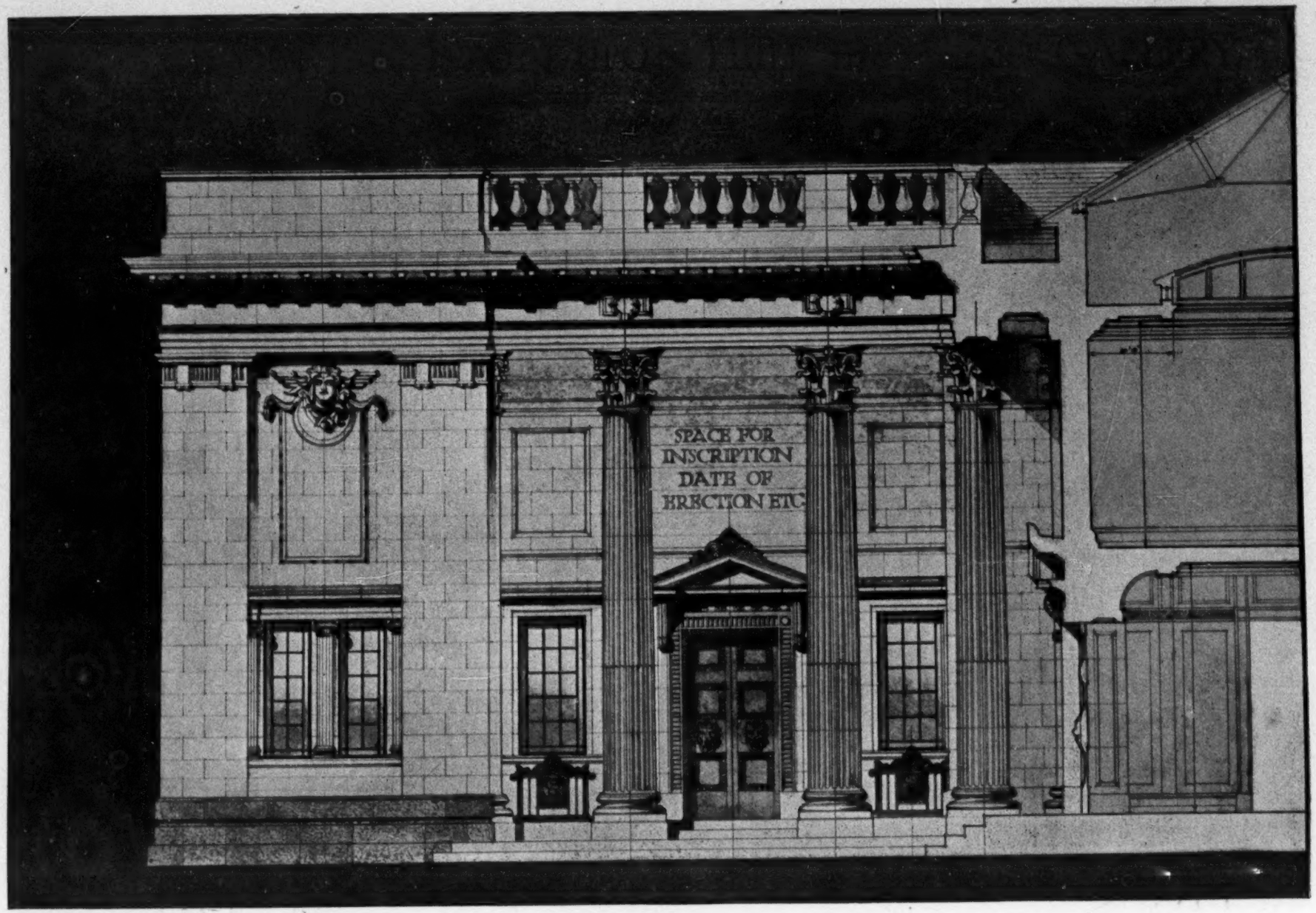

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ELEVATION TO WATER STREET.

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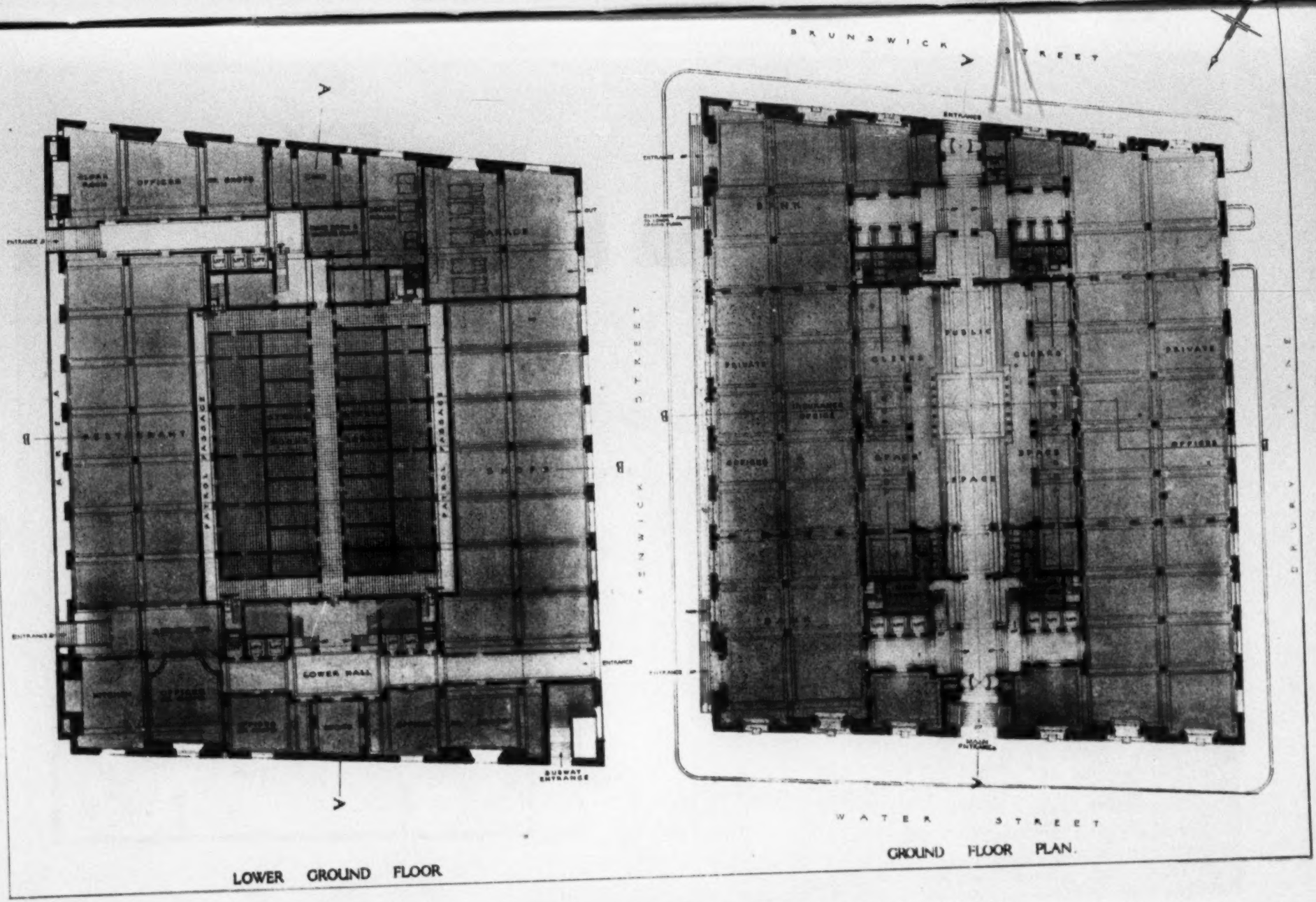
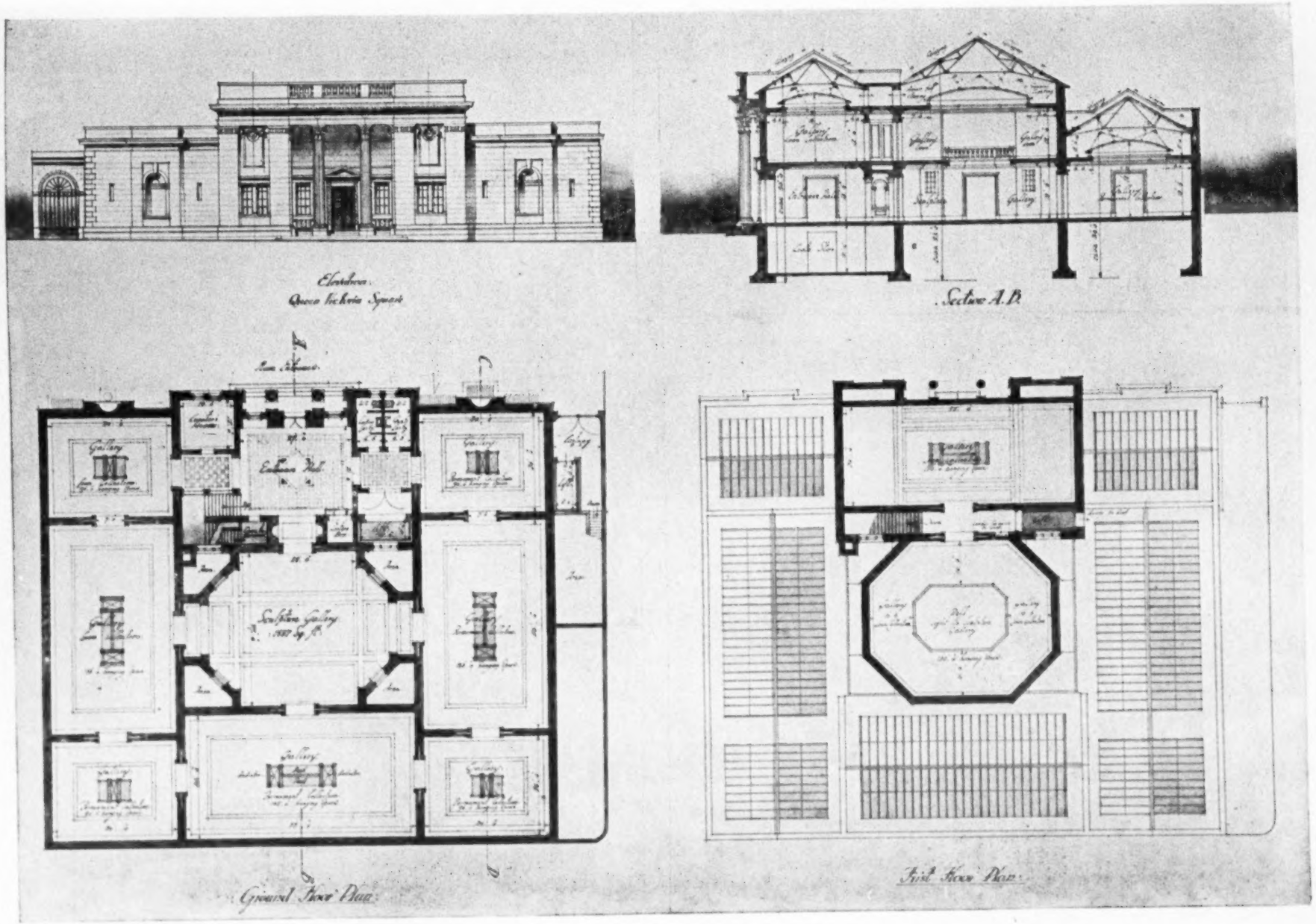


LOWER GROUND FLOOR

GROUND FLOOR PLAN.

DESIGN SUBMITTED IN THE RECENT COMPETITION FOR NEW PREMISES FOR THE HOLT LINE, LIVERPOOL.
BY MR. W. CURTIS GREEN, A.R.A., F.R.I.B.A.



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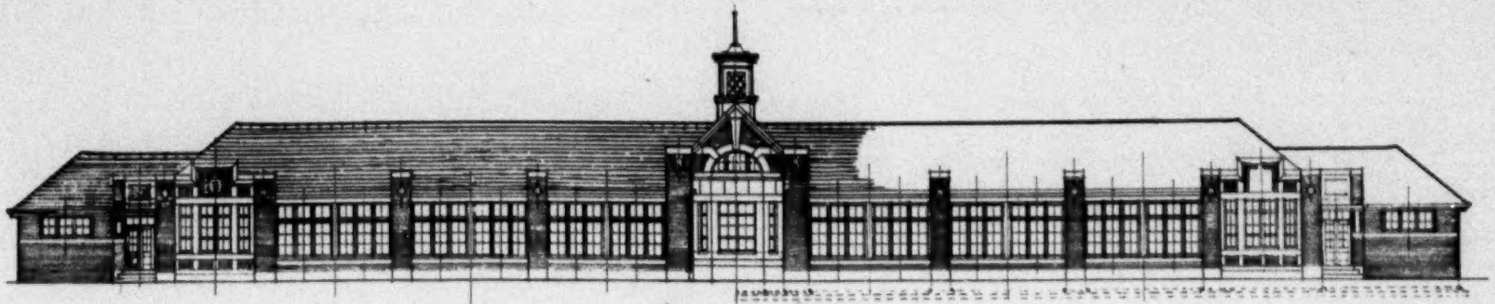
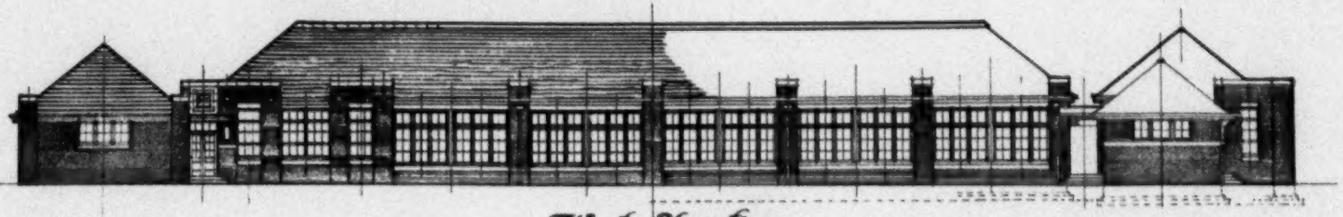
First Premiated Design: By Messrs. S. N. Cooke, F.R.I.B.A., and E. C. Davies, A.R.I.B.A.

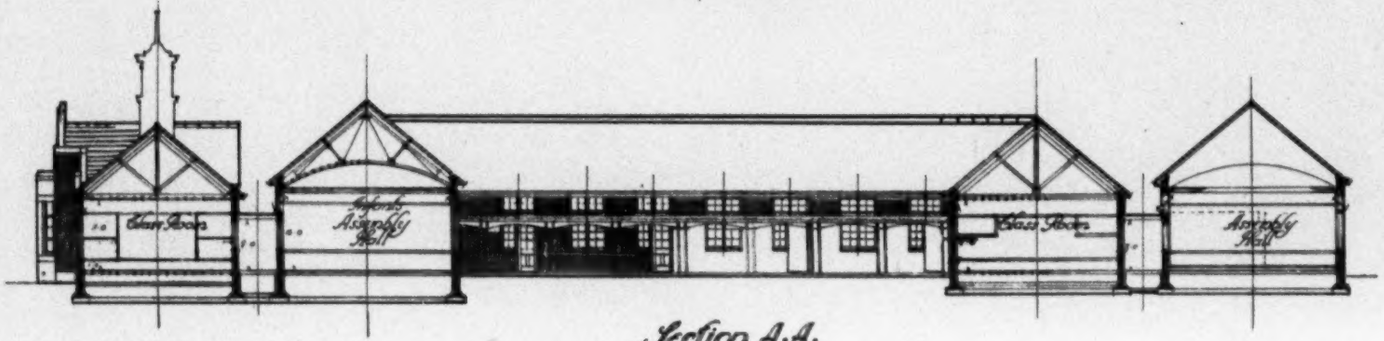
Essex County Council — Elementary School at DAGENHAM — BECONTREE — Education Committee



South Elevation

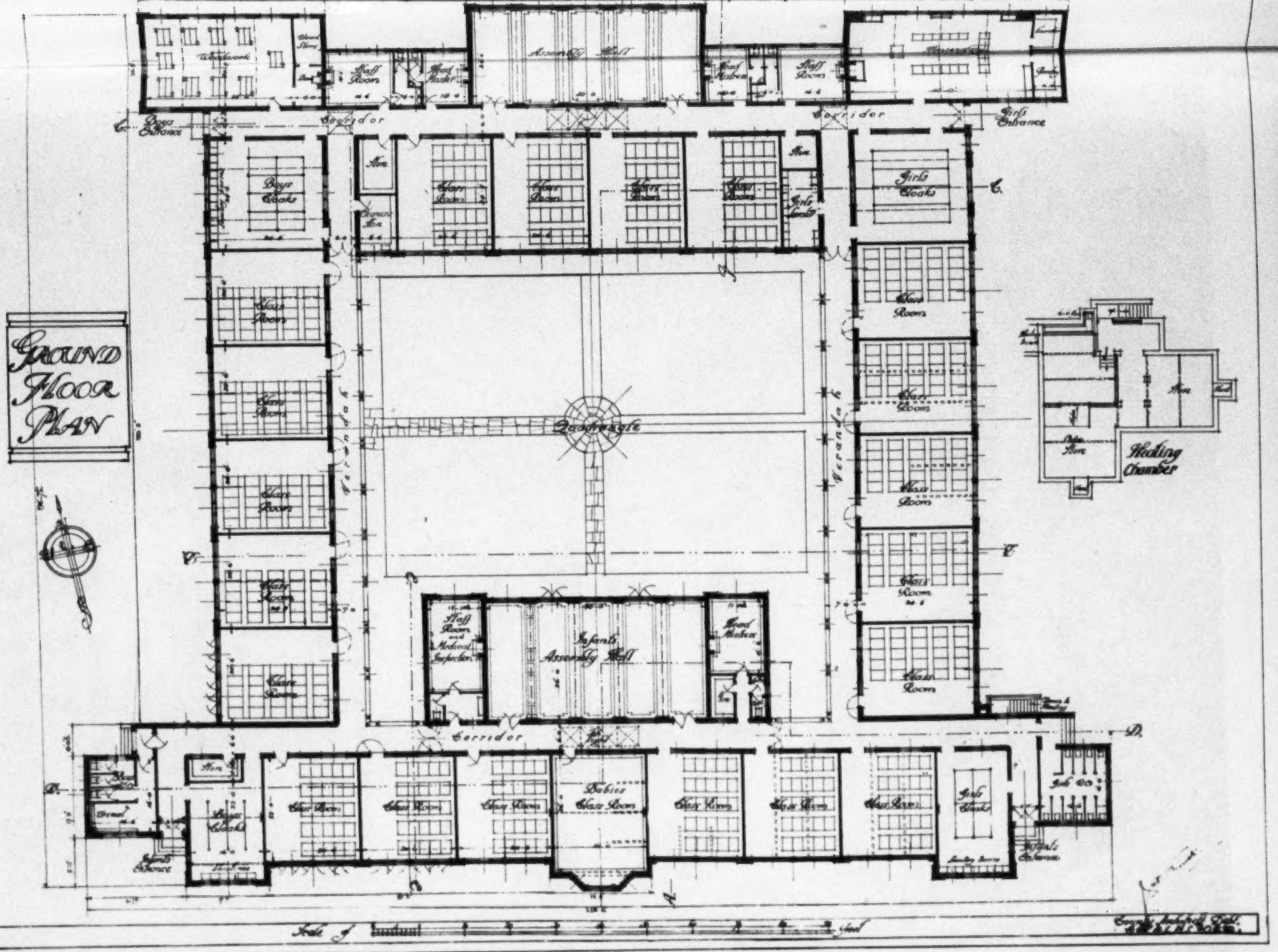


West Elevation

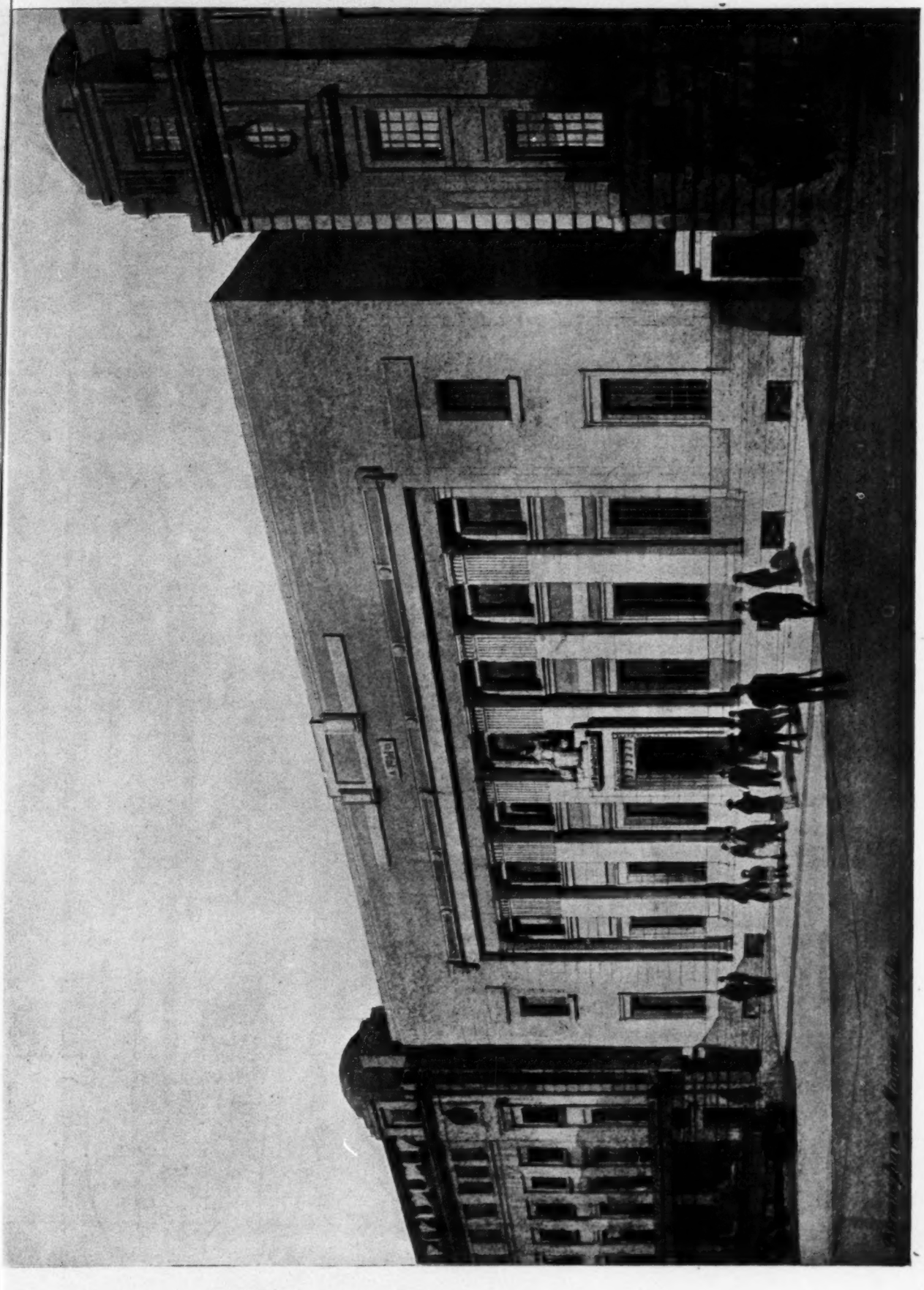


Section A.A.

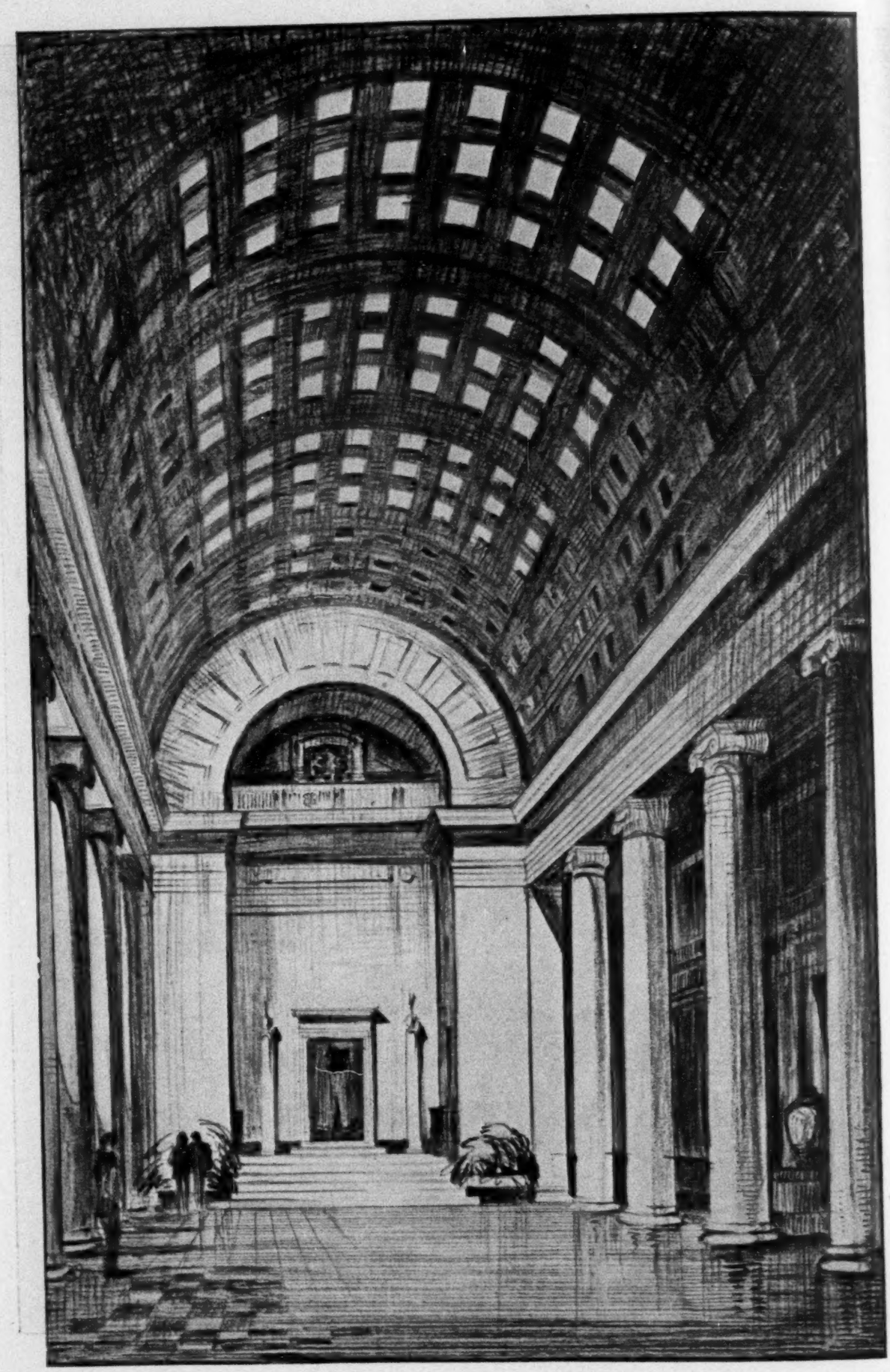
THE BUILDER, GOVERNMENT



MR. JOHN STUART, F.R.I.B.A., ARCHITECT TO THE ESSEX COUNTY COUNCIL.

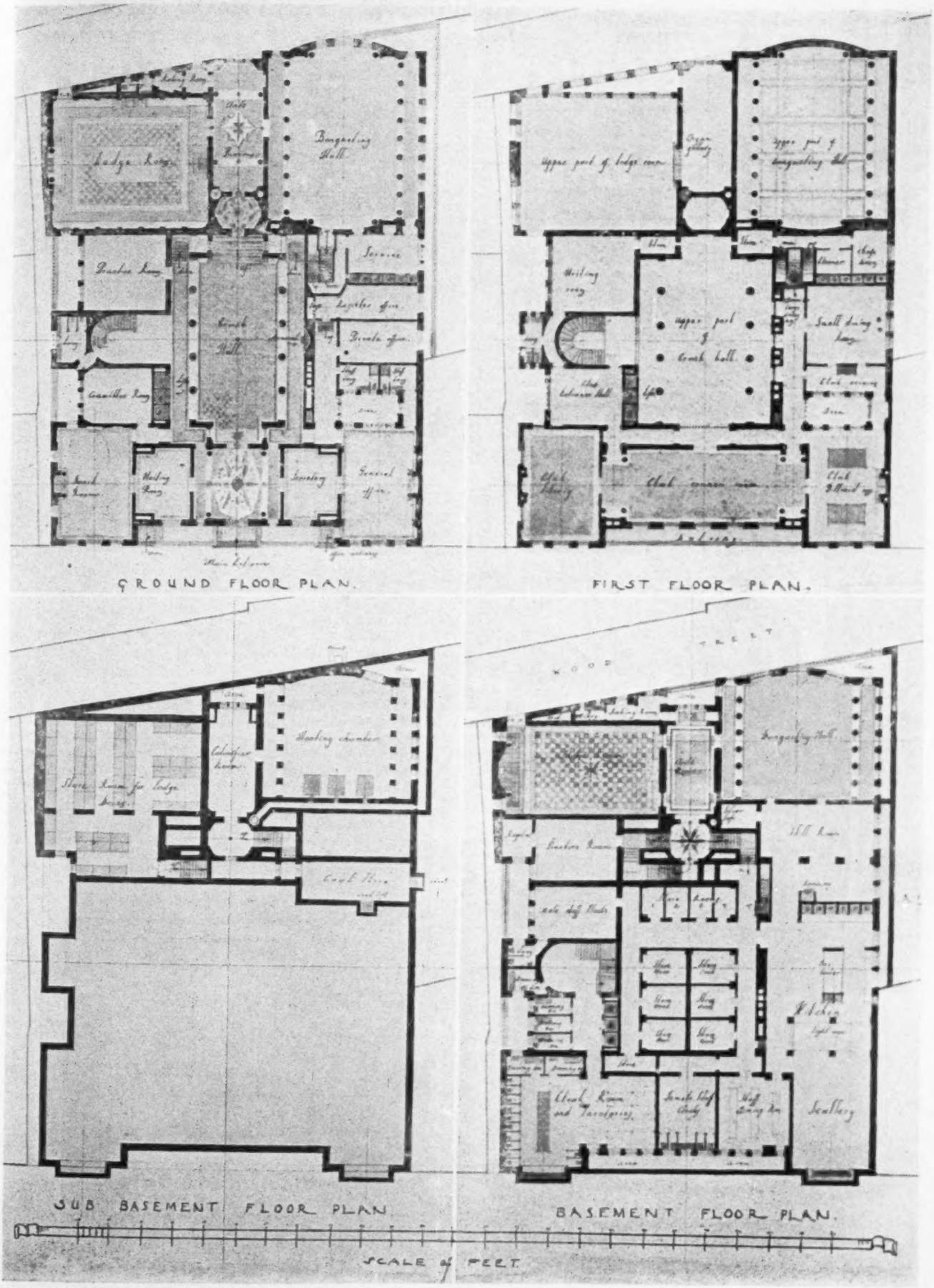


Birmingham Masonic Temple Competition. Perspective View of Design placed First: By MR. RUPERT SAVAGE, F.R.I.B.A. (Messrs. Crouch, Butler & Savage).
[Other illustrations submitted in this competition were given in our issue for September 28.]

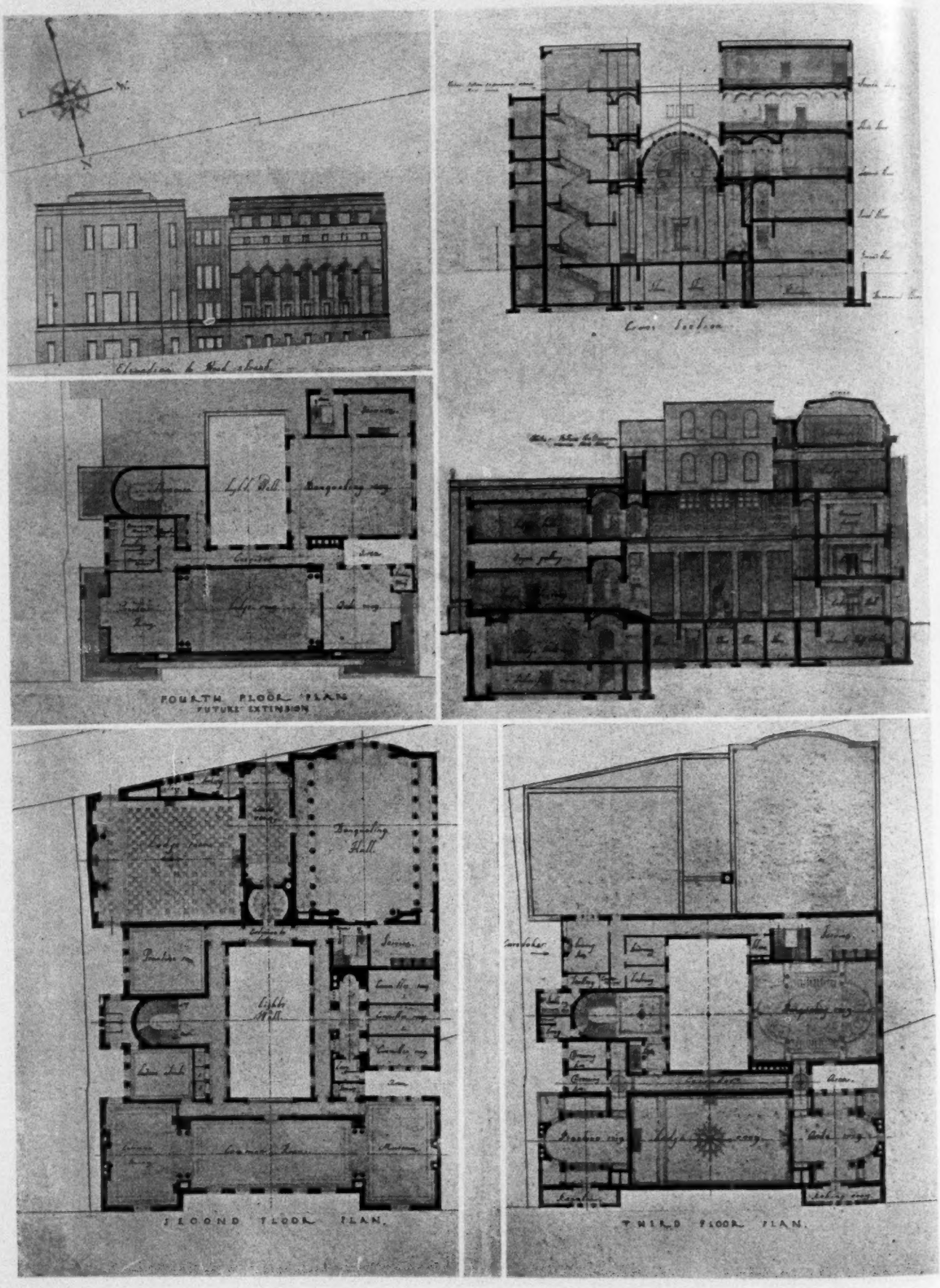


Manchester Masonic Temple Competition.

Design placed first: By MESSRS. THOMAS WORTHINGTON & SONS.



Manchester Masonic Temple Competition. Design placed first: By Messrs. Thomas Worthington & Sons.



Manchester Masonic Temple Competition. Design placed first: By MESSRS. THOMAS WORTHINGTON & SONS.

THE COMPLEAT ARCHITECT.

By DUDLEY HARBRON.

X.—Intention.

I DO not know why the preliminary consideration of the requirements in a building should be regarded as a French method of approaching architecture. Certainly the French have exploited it very thoroughly, but none the less it appears to be just ordinary common sense. Buildings do not spring from the brain of the architect as Minerva from the forehead of Jupiter: they result from a minute study of the purpose for which they are intended. The requisite information has to be acquired from somewhere or someone—from a building or a book—from a person familiar with the facts, whether professor or patron, employing the last word as indicating the client or building owner. If the person or persons for whom the building is intended do not know what it is that they require, who does? The client cannot be too copious with his information, nor the architect too careful with its collation.

Consider for a moment the simple case of a friend who wants to build a house. The architect has ideas in his brain for many houses, though none of them may coincide with the requirement of his friend. It is necessary, therefore, if time is not to be wasted, to learn from the friend at once what are his requirements. If he is to be pleased with the accomplished building it must bear a close resemblance to his anticipated needs. If it coincides he will be delighted.

But a house is after all the most easy problem with which an architect has to struggle. We all live in them. Because we are so familiar with houses in general we must be meticulously careful to learn the desires to be fulfilled by a house in particular.

The need for information is amply realised when the theme is one upon which the designer has not previously been engaged or with which he is entirely unfamiliar. In such circumstances some architects decline the work. The more courageous accept it. I know that this is a debatable decision, and that it was solved by a distinguished man who declined a very large undertaking and at the same time recommended another architect as better fitted to take upon himself the work because the other had had previous experience of the intention of the promoter. But such an incident is rare, and does not affect the argument. Specialists make themselves. It is, therefore, possible for any of us to follow their example by doing our best with each opportunity that we have.

There are so many highly developed processes that it is impossible for the best-informed to have more than a vague conception of what is needed. But we can bring to bear upon their criticism general ideas eliminating labour and waste of material and power, by machinery or men.

Bakers' ovens, brick-kilns, and boiler settings are simple matters to bakers, brick-makers, and boiler builders; they may be mysteries to ourselves. Turkish baths, synagogues, crematoria, what do we know about them? Very little. Banks, hotels, shops, we are on more familiar ground, for, as in the case of a house, we use them all as members of the community; yet do we recognise the point of view of the cashier, the director, the porter, in each of them? Unless we study the outlook of these individuals and many others nearly or remotely connected with it, and attempt to adjust the building to their united needs, we have not done our duty. Indeed, the lack of a fully realised idea of what is desired in the completed structure is the chief cause of an unsatisfactory result.

Banks, hotels, shops have one thing in common—the public use them all. If this implies anything it is that the entrance should be easy to find and clearly marked. The whole of them want our custom. The bank hopes we will conduct our business with celerity; the shop, that we leave before closing time; the hotel will be better pleased if we stay the night. The bank seeks to impress upon you its security, the hotel its comfort; the shop, of your need for the commodities in which it deals. It is unnecessary to continue the further elaboration of these three types of building; but a more extended consideration of any one of them will indicate the ramifications into which the study of intention leads, for every separate activity, retail or manufacture, religious or educational, artistic or legal, entails the realisation of intention before it can be housed. Let the shop stand for them all.

The chief concern of the shopkeeper is to persuade the public to buy his wares. He must sell by post or by agents, or over the counter. If the last method is employed he must attract the public to his premises by advertisement or publicity of sorts. In times past this used to be done by—

> . . . hoarsely shouting men, who greet
> Buyers as wind greets trees.

The like office is now performed by electric signs, or, in Paris, by little maps hung up at the street corner, with an arrow and a spot; the arrow represents the passer-by, the spot being the shop to which he is directed by the shortest route on the distressingly simple map. Having persuaded us to seek him out, the proprietor has to inveigle us inside. This he does by stages; his windows are so disposed and dressed as to cause us to pause and inspect their contents, they are graduated so as to lure us to the entrance and through inside: everything that can help him to succeed in this should be considered. As it is largely a question of holding the attention of the customer by the display of articles of common necessity at an attractive price, the windows near the entrance must be suited properly to show them. Once inside we must be kept in, and though not asked to buy we must be tempted to do so. The open access system is psychologically the most effective; for unless the customer sees the article, only such goods as he wants will be sold. It is by suggesting to us the need for things we do not want that the shopkeeper is enriched.

The departments in a large composite store must be grouped upon a systematic basis, one article leading naturally up to another, avoiding the disturbance of the corset department in search of a collar stud. It is injurious to disturb the business of any department by passing through. The circulation of the customers all over the building is of great importance, not only on each floor but to all floors. Give confidence against fear of fire. Whilst generally every artifice which can be devised to display the goods is of great moment, care must be taken not to offend the temperament of the type of customer on the score of too much stridency or too great reserve. Light, space, comfort, ventilation, a rest room, a writing-room, a post office, a theatre, even a crèche—all directed insidiously to render shopping a pleasure to the customer.

The second general consideration is the stock: where it is selected, unpacked, stored, and how dispatched. It should be easily handled, displayed not stored; stored, it is idle capital out of sight. As much ingenuity can be employed in the dispatch of goods after they are sold as in the selling of them. The whole problem should be reviewed afresh from different angles.

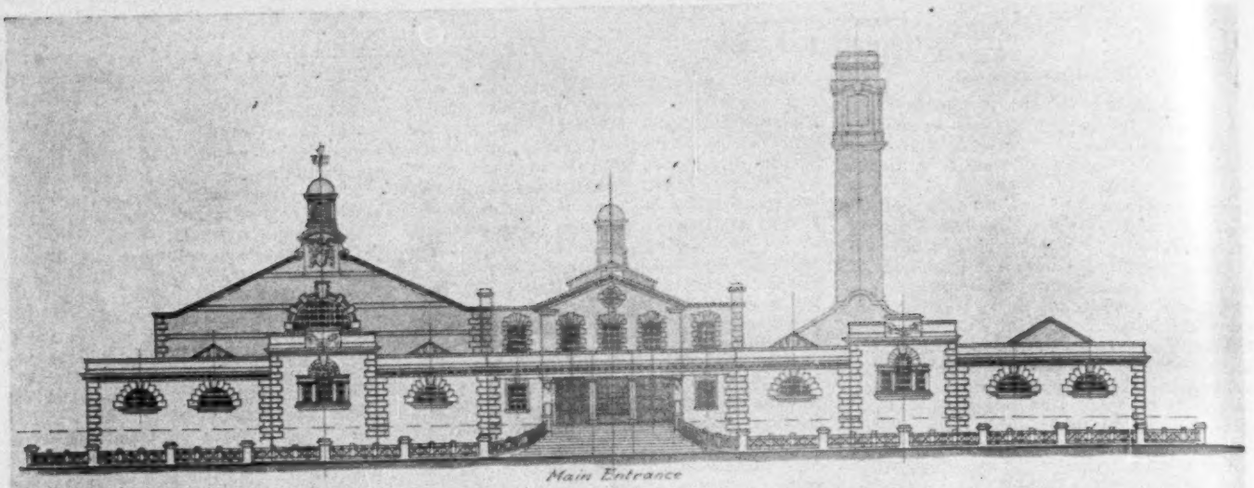
The third point of view is that of the staff, upon whom everything hinges ultimately. They look upon basements with less favour the closer they are confined to them. They know their way to the premises. They must have somewhere to put their bicycles, their coats and hats, change their shoes, wash and dress, rest when they are tired, feed when they are hungry, all detached from the working part of the structure and as different as possible in character.

There are many other points of view from which to regard the building, and the consideration of the items which have been touched upon could be enlarged indefinitely. The architect, then, has his hands full: all his ability will be needed to reconcile these varied requirements; to weigh and balance their respective importance; and to express them in building. As a first step to the successful solution of any problem we must realise the intention of a project, be that project what it may.

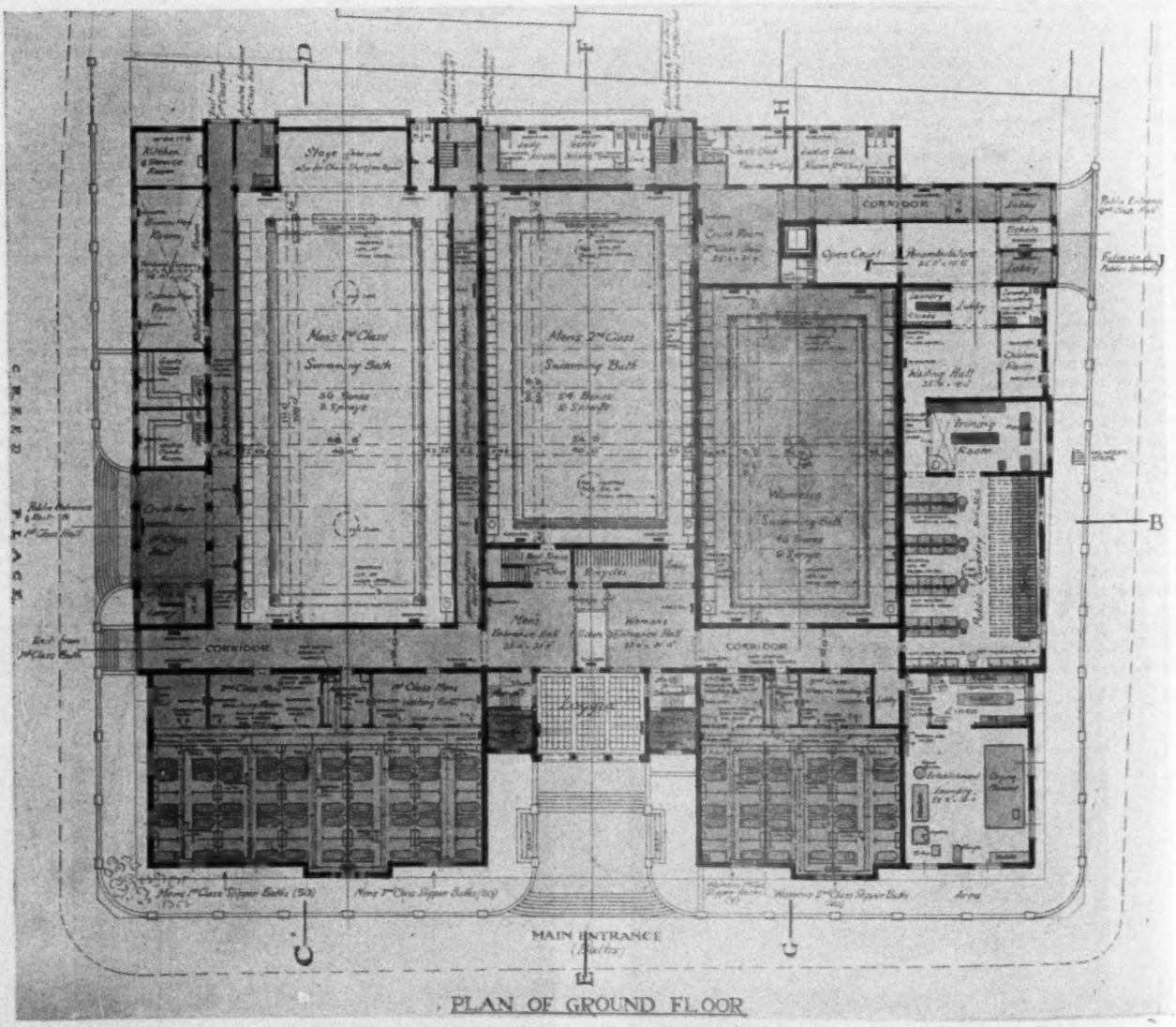
Development Scheme for Leicester.

The estimate for the cost of an internal development scheme for Leicester, which is being considered by the Leicester T.C., is put at a gross total expenditure of £3,829,649.

Ligy Garden City, near Ypres. (*See p.* 800.)



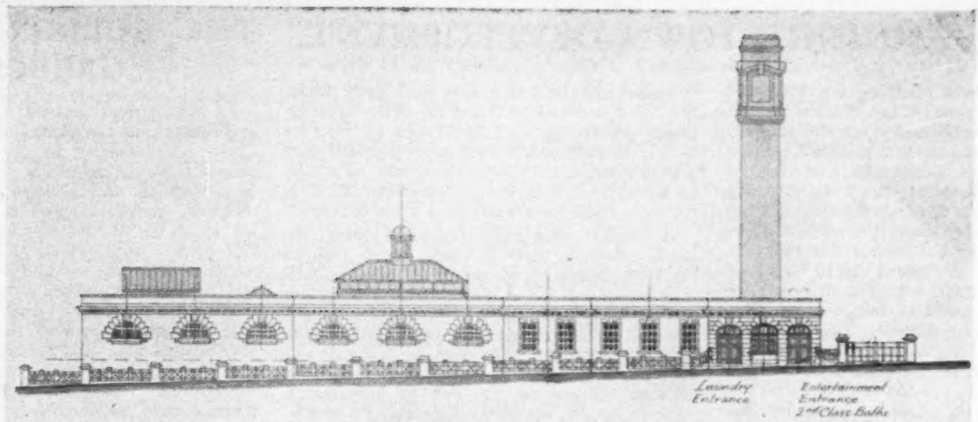
ELEVATION TO TRAFALGAR ROAD



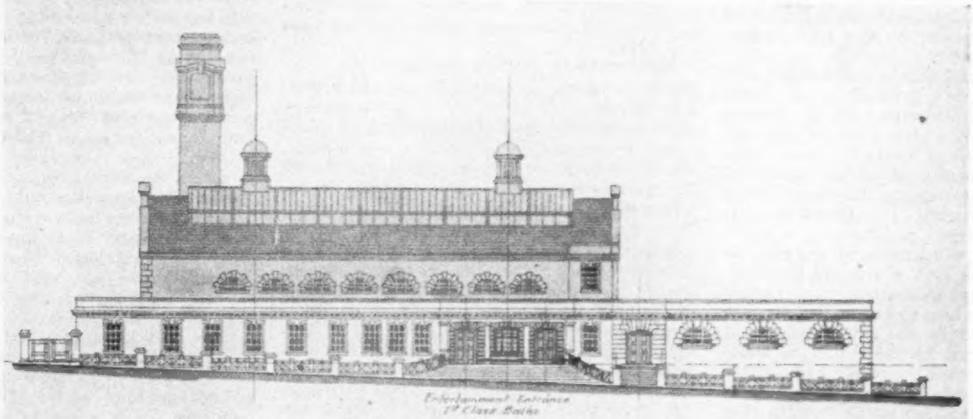
PLAN OF GROUND FLOOR

Greenwich Baths Competition.

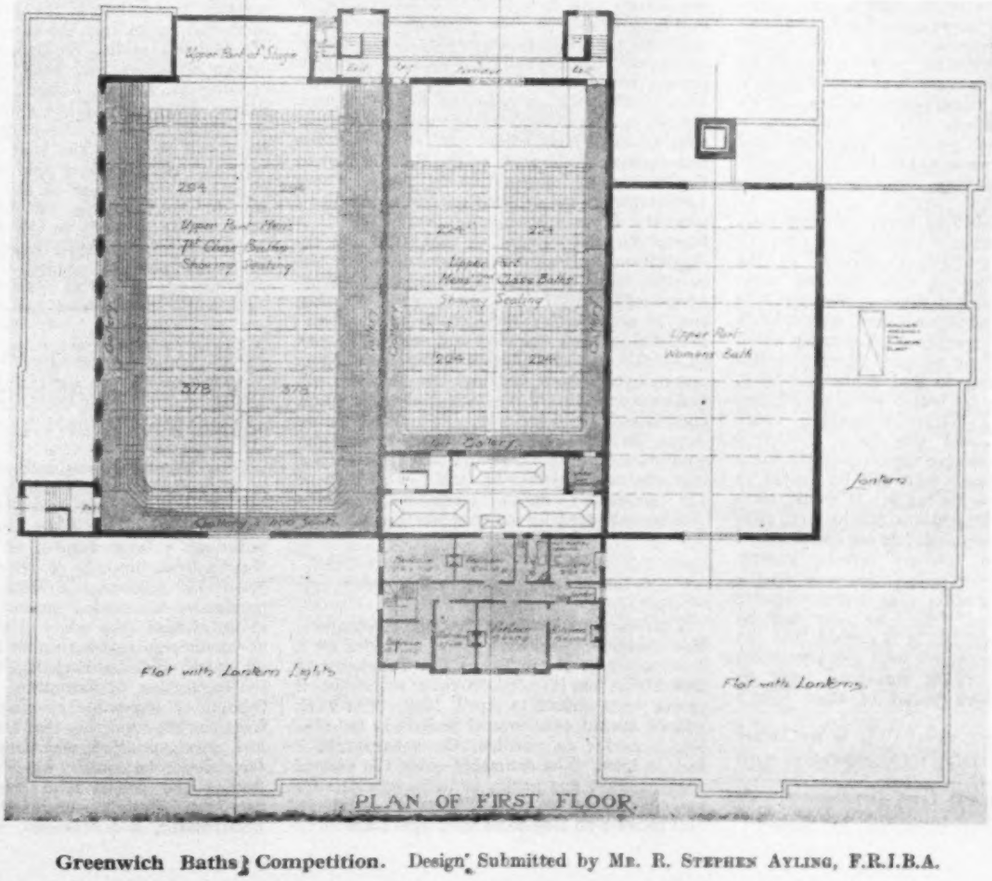
Design Submitted by MR. R. STEPHEN AYLING, F.R.I.B.A.



ELEVATION TO PARK STREET



ELEVATION TO CREED PLACE.



PLAN OF FIRST FLOOR.

Greenwich Baths Competition. Design Submitted by MR. R. STEPHEN AYLING, F.R.I.B.A.

TOWN PLANNING & TOWN DEVELOPMENT.*

A BOOK on town planning by Professor Adshead is a most welcome addition to the rapidly growing bibliography on the subject, and we are promised further good things, for this volume, dealing with the social and administrative conditions that influence town planning at the present time, is the first of a series dealing with the various branches of the science. The author tells us that he intends the series to form four primers. A student will be fortunate to commence his studies with a text-book so interestingly written and so well got up as this. We like the opening chapter. In its sixteen brief pages the sociological basis of town planning is presented in such a manner as to leave no doubt in the mind of the student as to the right foundation he should choose for his studies. Having studied man's relationship with man, we come next to that existing between towns—a refreshingly new presentation of these old facts. The organic structure of the town itself is then considered, and as a living, throbbing entity, its manifold functional organisation is studied to give true understanding of the whole.

Much has been said of late on transport and traffic requirements generally. Professor Adshead urges reconsideration of the present system and specially of the needs of our new industrial areas, such as Kent and South Yorkshire, where the recently established centres of the coal industry are already drawing to those districts other industries. It is hoped that the interests of all concerned, and the many complex problems involved, will be met by the application of the scientific laws of regional planning. As regards passenger traffic, the various needs of the individual on long and short journeys are considered. Regretfully the author tells us of the £11,000,000 spent by the L.C.C. on tramways for London, when the public had already discovered that motor-'buses better met their needs. In Professor Adshead's opinion the £11,000,000 had better have been spent on street widening and improving street surfaces.

The power the London Tube Railways wield in moving populations and fixing new residential quarters is an interesting study, and whilst welcoming the new areas opened out, Professor Adshead voices a warning that it is not always desirable that residential property should be too accessible. The running of a railway to a small suburb of middle-class houses, which formerly was situated, say, one mile from a railway station, will probably make the land in the vicinity more saleable, but in so doing it may depreciate very seriously the houses already there.

Speaking of roads and traffic requirements, the author takes what we will venture to call a somewhat contradictious attitude to the very generally accepted view that we must widen our overburdened streets. Perhaps it is this fact being so widely accepted by road and county engineers throughout the country which has made the author question their premises and has driven him to find other and what appear to him to be better solutions of this pressing problem. Whilst welcoming every suggestion made—and one from Professor Adshead is sure to receive the consideration due to it—there are many who will be unable to agree with the view he takes. It would seem that some of his suggestions fail to meet adequately the need, and therefore are not practical propositions. "To convert certain narrow streets into ways for pedestrians only during certain times, and certain wide streets narrower and traffic diverted," may or may not be theoretically correct, but it is certain that the idea, besides being thwart with great practical difficulties, would never commend itself to liberty-loving Britons proud of their King's highway.

Professor Adshead says: "It is far better to have a narrow traffic way constructed with first-class surface than a wide road badly made, because space can be found for twice as much traffic proceeding at thirty miles an hour as at fifteen, and with a wide angle of vision and a good surface, such roads need only, as a rule, be about 20 ft. All things considered, 20 ft. is the right width for a trunk road in the country."

In dealing with road problems to-day, we must, however, bear in mind three things: (1) That transport of goods by road is still rapidly increasing, and it is fair to say, as motors and petrol become cheaper, road transport will assume, within the next few years, proportions not yet dreamed of; (2) that size and speed of all petrol-impelled vehicles will increase; and (3) that we are on the eve of very much cheaper motors, both for business and pleasure, and it is fair to assume that the remarkable increase of motor cars will continue at an increasing ratio.

To Professor Adshead's widths, viz.:—

Main roads outside, but between towns, 20 ft.,
Main roads immediately outside built-up area, 30 ft.,
Main roads in built-up streets, 40 ft.,

there are many, no doubt, who would like to add to each a further 20 ft. It is not perhaps made sufficiently clear that, although he advocates a comparatively narrow road surface, the actual width of road between hedges should be, with as few exceptions as possible, 60 ft., which was the width laid down by the General Turnpike Act so far back as 1773.

There is an interesting chapter on Road Administration, taking us back to 1285, when, by the Statute of Winchester, the responsibility of keeping roads open was placed on landowners and certain prescribed persons. An Act of 1691 directed surveyors to make roads at least 8 ft. wide. In those days and until, in 1654, the Commonwealth Parliament passed an Act "for amending and keeping in repair the common highways within the nation," and provided a rate not exceeding 1s. in the £ for road-making, the finance for roads was dependent upon fines. Many and varied were the bodies and trusts who had charge of the roadways in the seventeenth and eighteenth centuries, and whose business it was to find the necessary money for their repair. Under the turnpike regime, we are told, the London to Manchester stage-coach paid as much as £7 per annum for the upkeep of each mile of road. The final step in road jurisdiction was, of course, the transference of the work of the Road Board to the Ministry of Transport in 1919, under whose administration much new work has been accomplished and many improvements effected. It is interesting to note that in 1921–1922 the receipts from the Motor Tax Account alone brought to the Ministry £10,795,000. In the same period, £7,239,637 was contributed to the cost of constructing main roads and bridges; £590,256 in road widening and surfacing; and £4,405,916 as a contribution to the cost of using unemployed labour on road construction.

About one-third of the book deals with Municipal Housing and the early and recent Housing Acts. To have this legislative matter sorted and summarised as it is by the author will be a boon to many a student, and his epitome of the procedure under Town-Planning Acts will be welcomed by many older students.

* "Town Planning and Town Development." By S. D. ADSHEAD. (London: Methuen & Co., Ltd.) 10s. net.

Reconstruction in Japan.

The Times understands that the Reconstruction Budget Committee's report provides for a total expenditure for Tokyo and Yokohama of 705 million yen (£70,500,000) over a first period of six years ending in April, 1929. The work will be spread over several periods in order to avoid, as far as possible, the necessity of a foreign loan. The estimates cover the cost of roads, canals, and parks, and also subsidies for assisting industries, rebuilding public buildings, and interest on long-term municipal loans.

THE GOLDEN AGE OF GREECE.

IN his second lecture on ancient Greek architecture, at the Central School of Arts and Crafts, on November 14, Sir Banister Fletcher passed from the primitive period to the period of perfection, and reviewed the conditions—religious, geological, and geographical—which led up to the architecture of the developed or "Hellenic" type, which, as always, reflects the national life. The sea had a unifying effect on the Greek nation, which, owing to the long seaboard, the harbours, and the innumerable island stepping-stones of that country, was a maritime people, and colonised by commerce, not by conquest, among the islands of the Aegean and round the Mediterranean. This international intercourse is reflected in the resemblance of several features of Greek architecture to certain characteristics in Egyptian, Assyrian, and Cretan art. This was a time of rapid development. The rough Mycenæan wall-work was transformed by the subtle Greek spirit into the perfect form of the golden age of Greek architecture, achieved with almost startling suddenness. This was the great temple-building period, and the transformation was the more marvellous when we remembered that the proud temple of the god had its origin in a humble tent for man. The priests were not an exclusive class, and there was none of the Egyptian sacerdotalism, and thus the small "naos" for the statue of the god took the place of the mysterious halls of the Egyptians. There were other contributory forces at work to produce that wonderful beauty of simplicity. A clear climate demanded fineness of line, and the wealth of native marble from Mount Pentelicus rendered possible the pure line, smooth surface and close joint which clothe Greek buildings with mysterious beauty, while abundance of golden light played over the buildings and enhanced the rich hue of the marble and the colouring which appears sometimes to have been employed. The creation of cities, moreover, led to a municipal zeal which gave impetus to art. The building sites were usually placed near a hill for safety, the walled area on the summit being known as the "Acropolis," somewhat resembling the commanding position of a mediæval castle. Sir Banister Fletcher gave interesting views, and brief vivid descriptions of Olympia, Delphi, Athens, Selinus, and Pergamon, indicative of the spread of Greek art over Asia Minor to the eastward and South Italy and Sicily to the west. At the capital city, the victories over the Persians gave the impetus for the blaze of artistic achievement seen in the Parthenon on the Acropolis, and other buildings, early in the fifth century B.C. —the summit of achievement in this world-centre of the building art.

ARCHITECTS' AND SURVEYORS' ASSISTANTS' PROFESSIONAL UNION.

IF architectural assistants are as enthusiastic in their work as they are in their pleasure—and there is no reason to doubt it—then the profession is indeed fortunate. On Thursday last week a large number of members of the Metropolitan Branch of the Architects' and Surveyors' Assistants' Professional Union were present at a smoking concert held at Carr's, in the Strand—the scene of similar gatherings in previous years—and under the chairmanship of Mr. E. Fiander Etchells, Past-President of the Institution of Structural Engineers, had a thoroughly enjoyable evening. One gathered from the brief speeches that the Union was now in a strong position, and that the membership throughout the country was rapidly increasing. Among the artists who contributed to the excellent entertainment were Carlton, a card manipulator, and Rameses, an illusionist.

MANCHESTER SOCIETY OF ARCHITECTS.

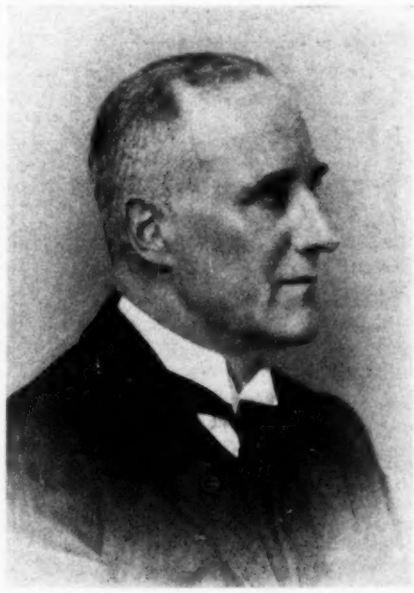
THE first meeting of the Session 1923-24 of this Society was held recently at the Society's rooms in the Parsonage, Manchester, when the President, Mr. Francis Jones, F.R.I.B.A., gave the annual address to the members, from which we take the following:

The now firmly established Conference of Presidents of Allied Societies, which meets four times a year (or on other occasions if special business requires it), also reports to the Council of the Society. In this way the Council is kept informed very thoroughly of the doings of the profession, not only as regards the Royal Institute, but also regarding the whole of the allied societies, which, of course, embrace the whole of the United Kingdom and include many architects other than Royal Institute members.

In addition to the usual meetings and sessional papers, he have again joined the University and Institute of Builders in holding three public lectures at the University. These lectures have become an institution; they are invariably well attended, and I am sure give an impetus to the lay interest in architecture, which is of such vital importance not only to the profession but to the whole country.

During the year the Rome Scholarship has been won by a student of the Manchester University—a member of our Society. I am sure our congratulations go out both to the Manchester School of Architecture and to the winner, Mr. Cordingley. The Society has worked hard for the school for many years, but only during the last year has the school really become a definite self-contained unit of the University, with its own studios and its very complete staff. It is perhaps difficult for the present generation of students to realise how well off they really are, and there can be no doubt that the benefit will not be confined to the students, but that the whole city and neighbourhood will reap a gradual benefit in living amongst better buildings of every class. There can be no doubt that the architectural schools throughout the country will have more and more effect every year: they will turn out young men efficient and well trained, who will, I am convinced, justify the great architectural schools, and ultimately leave the country the better for their existence. As far as the Manchester School is concerned, I hope Mr. Cordingley is only the first of a long list of winners of the Rome Scholarship, and that the city will benefit by the great work which the school undertakes.

During the last year there was the great architectural controversy on the Registration Bill proposed by the late R.I.B.A. Council, which was turned out *in toto* at the last election. The Bill as proposed by the Council could never have been approved by any Government, and the members of the R.I.B.A. considered very rightly that to put up a Bill for the sake of putting up a Bill—any old Bill, in fact—was mere waste of time and of money. The new Council as elected last June is composed of the leading members in the profession, men of whom there can be no doubt that they are out solely for the good of architecture and the good of the profession; I am sure the management of the Institute's affairs is safe in their hands. The great problem of registration is, however, still unsolved, and it is up to the Council before next year to put a policy before the members. What this policy will be I am not yet able to tell you, but I can assure you that the whole question is being most thoroughly investigated, and that nothing will be done without consultation of the members. It is a most difficult question. Like Free Trade and Protection, there are many points for and against. As far as I am able to know the feeling of the members of this Society it is in favour of registration, provided the interests of the Associate class are duly protected; whether this is the correct view to take or not, I am convinced it is the view of the majority of our members. I would, however, like to say on my own account that I do believe that registration is in the best interests of the profession, and not only of the profession, but of architecture and of the inhabitants of this country. It must mean in the long run the raising of the standard of work, and even if this is achieved at a possible temporary sacrifice, it will surely be worth while. In order to achieve it the profession, whether R.I.B.A. or otherwise, must be substantially solid in favour of it; what a difference it would have made had registration been put into action, say, twenty or thirty years ago. What a difference it will make to the country and to the profession ten, twenty, or thirty years hence! Some measure of sacrifice was required of the lawyers and of the doctors when these professions were made closed, but surely it has been worth while. Surely we are capable of doing what these men did before us. I repeat that the Associates, who have toiled for their examination results, must have their interests preserved, and I hope some way will be found to achieve this and yet to unite the profession.



Mr. C. McArthur Butler

(Secretary of the Society of Architects).

The Manchester Society has had under its consideration the question of local branches to the Society in neighbouring towns. Negotiations have already been opened with the Burnley Society, who are desirous of joining themselves to the Manchester Society. I think these branch societies are in every way desirable, as the more architects can keep in touch with each other the better for architecture, and that is our *raison d'être*. Branch societies might also be formed in various Lancashire towns; they would all be governed by the Manchester Society as regards professional practice, rules of competition, and so on. They would all have the benefit of the Societies' papers when they could come to Manchester, and also of the students' competitions, the library, and so on. If the Society does good work, the others would be infected by it. It is hoped, again, that the general standard of work would be raised by such unions.

From conversation with many members I think I am justified in saying that the profession is much busier than it was at this time last year; there are, of course, individual exceptions, and the prolonged slump in general trade must and does affect the profession very seriously. Still, I think the profession as a whole is fairly fortunate at the present time. Building is still very dear, but prices have come down very substantially, and it is doubtful whether they are likely to come down any more—at any rate, at present. It is up to architects, therefore, to study economy in building; no magical new methods of cheap building have come into being, so the task of cheapening rests with the architects, from whom the greatest skill is required in so designing that the most economical building possible can be achieved. Of the future I will not venture to prophesy: it is in the hands of the gods, and possibly of politicians.

The Manchester war memorial has had its foundation-stone laid; as you know, there have been many and troublesome battles before the performing of this ceremony. A competition was proposed, and indeed decided upon, but the committee could not bring itself to conform to the competition regulations of the R.I.B.A., which required the assessors' award to be final and binding; the net result was that the competition was washed out, and Sir Edwin Lutyens was appointed architect for the memorial. Everybody hopes that the memorial will be worthy of its great purpose; no better architect could have been appointed for the work.

I will just take this opportunity of impressing on members the importance of adherence to competition regulations. As long as all architects are loyal to their fellows—and as far as our members are concerned they certainly are—competitions will have to be conducted on the proper lines. This is one of the great points that would be attained by unification of the profession: all architects would then be brought into line and the best man would get his chance, as he does not always under present conditions.

THE SOCIETY OF ARCHITECTS.

THE close of the Society of Architects' Session in October, 1923, coincided with the completion by Mr. C. McArthur Butler of his twenty-fifth consecutive year of office as Secretary. After being articled to the late Clapton C. Rolfe, A.R.I.B.A., of Oxford, and working as an assistant for other architects in various provincial centres, he was elected a member of the Society in 1894, and was engaged in practice as an architect when he took up his present appointment in 1898. Since 1898 membership of the Society has trebled; it has founded overseas branches; acquired permanent headquarters; extended its sphere of utility in many directions; and is continually finding new outlets for its energies without neglecting the main object for which it was founded, viz., the attainment of statutory registration of architects. Of late years a feature of the Society's work has been its support of the programme of the Beaux Arts Committee and other educational bodies, and its foundation of architectural scholarships at home and abroad.

Mr. Butler, who numbers amongst his qualifications that of a Chartered Secretary, frequently represents the Society on conferences and committees dealing with matters connected with the profession and the building industry, and is an original member of the Beaux Arts Committee, of which he was for many years the Honorary Secretary, and also a member of the Executive Committee of the Architects' and Surveyors' Approved Society under the National Health Insurance Scheme. He took a prominent part in the deliberations of the Unification and Registration Committee, and at the request of the Chairman prepared the "federation" proposals as an alternative to the "absorption" scheme.

Mr. Butler is the author of a number of articles and papers on matters of professional interest, a frequent contributor to the Press, and for many years combined the editorship of the Society's *Journal* with his other duties.

During the war period (1914-18), Mr. Butler,

in addition to carrying on and extending the work of the Society of Architects under the difficulties and restrictions imposed by war conditions, gave his services in an honorary capacity to the profession and the community in other directions. He served on the Executive Committee of the Architects' War Committee, the Architects' Committee of the Professional Classes War Relief Council, the Joint Conference of Civic Surveys, and was joint Honorary Secretary of the Architects' Reorganisation Committee and a member of the Architects' Demobilisation Committee. Mr. Butler takes an active share in the work of County Societies in London, and was for some years Secretary of the Association of Men of Kent and Kentish Men, and was afterwards a member of the Council and served on the Committee of the Cumberland and Westmorland Association. He was admitted a Freeman of the City of London in 1907, and in the same year became a Founder and the first Senior Warden of the Society of Architects' Lodge of Freemasons, and after serving the office of Master was appointed Secretary, a position which he retains.

DOMESTIC & HISTORICAL ARCHITECTURE OF ENGLAND.

MR. ARTHUR STRATTON, F.R.I.B.A., Reader in Architecture at the University of London, has just returned from Holland where he has been lecturing to large audiences in Amsterdam and other centres on the historical and domestic architecture of England. The lectures dealt with the vernacular styles of house design in England during the Tudor and Stuart times, and more especially with the influences from other countries which tended in the sixteenth century to divert English builders from their traditional methods, and in the seventeenth century to bring about an entire change in building construction. The various influences emanating from Flanders and the Low Countries which resulted in the early Renaissance architecture of England were contrasted with the later influences from Italy and Holland which were more beneficial and led to the world Renaissance of the seventeenth and eighteenth centuries. Mr. Stratton emphasised the good influence of the brick architecture of Holland upon the so-called Georgian vernacular style in England, and aroused considerable interest among the Dutch architects who were closely following modern developments of house designing in England. He also availed himself of the opportunity to remind them of the excellence of house building in England all through the centuries, and our genius for seeking inspiration from various countries while retaining a national character of our own. The lecture was fully illustrated by means of lantern slides, and was very well received.

ALFRED BOSSOM TRAVELLING STUDENTSHIP

THE subject set by the jury for the R.I.B.A. Alfred Bossom Travelling Studentship is as follows:—

A company is formed for the purpose of developing an island site 150 ft. by 100 ft. in the business quarter of a first-class provincial town of not less than 400,000 inhabitants. The student is required to name the town and the position of the site and to submit a scheme as architect to the Company which complies with the following conditions:—

(*a*) He is to state the annual value of the site.

(*b*) The property is to be developed to the best advantage, say, as a store, shop, offices, bank, &c., and the capital expended must be such as with its revenue will appeal to the public under current conditions. The capitalisation of the company being stated in outline.

(*c*) Local rates to be stated.

(*d*) The height is to be left to the student, but is not to exceed 100 ft. to the springing of the roof; but there may be two floors in the roof.

(*e*) The Model By-laws of the Ministry of Health or similar enactment must be assumed.

(*f*) Promotion and legal expenses to be estimated at £2,000.

(*g*) Central heating must be provided.

The scale of plans, elevations and sections is to be 1-16 in. to 1 ft. No perspective drawing will be allowed, and no repetition of plans or elevations is required. Drawings may be lightly tinted in monochrome. The report accompanying the plans must deal with the approximate cost of building and the financial return of the whole scheme.

Associates of the Royal Institute who have not passed through one of the schools included in the competition are required to deliver their designs and reports (in competition for a Silver Medal) at the Royal Institute not later than December 1. Schools of Architecture included in the competition are required to announce that December 1 is the closing date for the local Silver Medal Competitions. The Silver Medal designs and reports must be submitted to the Royal Institute not later than December 31.

In the case of schools not recognised for exemption from the R.I.B.A. Final Examination, the local award of a Silver Medal is subject to the approval of the jury for the Gold Medal and Studentship.

HEALTH AND THE BUILDING.

IN his Second Chadwick Public Lecture on "Hygiene and Architecture," given at the Society of Arts on November 16, Major Harry Barnes, F.R.I.B.A., said he used the term "building" in the widest and most comprehensive sense to include all those matters of construction which turned the countryside into the town under the heads, "Where to build," "What to build," "How to build," although perhaps the most important consideration was outside the scope of the lecture, and that was "When to build."

There were not many chances of selecting the sites of new towns in this country; in that respect America had the advantage of us. Sites of towns were determined in old days by strategic, defensive and military considerations. In these days a railway junction or coal deposit was a more determining factor. In most cases, however, the main considerations were geographical and geological. Sites being selected, the consideration of how to lay out a town led directly to zoning.

After discussing American and British views on zoning, the lecturer passed to the question of roads. He concurred in the views expressed by Sir Henry Maybury that more good could be done by laying down entirely new roads than by conducting surgical operations on the old ones. The aim should be not to see how much traffic could be forced through an ancient centre, but how much could be deflected to roomier channels. He never looked at an old map of London without thinking what a pity it was that the old villages, which had grown into the London boroughs, had not been preserved, and the extension of London taken place on the land between them. He expressed the hope that the new road developments might spare the old villages and towns, which should lay off the new high roads so that those who had no interest in them need not pass through them to the discomfort of those who had. He pleaded for a land in which not only the business man was provided for, but where the loiterer might find a place.

Concluding with a reference to the relationship between hygiene and the building itself, the lecturer said the main problem in connection with buildings was that of smoke abatement. Hygiene had won notable triumphs from the land and in the water, by the removal of refuse and the prevention of the pollution of streams; it remained now to achieve its final victory in the air. The pollution of the air was responsible for respiratory diseases, an increase in the death-rate, especially amongst children, loss of sunshine, damage to vegetation and buildings, and for waste amounting to millions of pounds. Hygiene cleansed our rivers, and we must now cleanse the air. That was the great problem which hygienists and architects might join to solve.

EXHIBITION NOTES.

CAMERA CLUB.

FEW people realise what an immense difference it would make to us all if we saw things as the camera presents them. Our eyes focus on some point and within a small distance of that our vision is clear and defined; beyond that the vision gets gradually blurred into nothingness. People who criticise the looseness and vagueness of an artist's handling in the nearer portions of his sketch forget this; they fail to realise that this treatment is the nearest approach to our actual sensation of sight. Those who understand this cardinal fact about vision have felt increasing interest in the work of those photographers who have compelled their work to its recognition, and we now constantly see at important photographic exhibitions many fine examples of artistic triumph over mechanical process. We cannot complain if through the medium of photography the artistic insight produces beautiful results, but it is well to be reminded where the skill of the artist appears. In the exhibition of pictorial photography at the Camera Club by Mr. Jas. MacKissack, we see not merely the evidence of a skilled technique but the eye of an artist who gives something of the distinction of an artist's drawing to many and varied subjects. A patch of bare walls and tree branches, a cathedral, or a figure at a street corner come with equal force and distinction in Mr. MacKissack's handling of the camera, and it is a real pleasure to see what he has done with the subjects now shown at the Camera Club, for his effects are not only excellent, but varied from grave to gay, from broad, soft and rich tones to brilliant emphasis of bright sunshine and glittering detail; on the whole the former effects predominate, and that is why the exhibition is so pleasant a one.

WALKER GALLERIES.

Amongst the quickly succeeding exhibitions at the Walker Galleries we do not often find one so full of freshness and charm as that of Capt. Morgan's water colours of Sussex. Here are some fifty drawings which really represent water colour art, and which convey an impression of genuine individuality; with colour effects of a bright and happy kind, erring neither in richness nor insipidity—a picture of green banks with a water foreground, an expanse of sky full of pleasing gradations of purple and blue above a dark-toned land—subjects of the simplest kind bring pleasurable emotions from the artist's brush. Surely no one need be without charming examples of water colour art even in these days in view of such an exhibition, of which the only criticism to be offered is that it is cheap and modern! One almost wonders that a Sussex landowner or a Sussex museum does not buy up the whole collection.

Two other exhibitions of interest at Walker's Galleries are those by Lady Jephson and Miss Hilda M. Sides, which both contain some strong handling if a little lacking in freedom and spontaneity.

FINE ART SOCIETY.

The wonderfully clever work of Mr. Russell Flint at the Fine Art Society is assured and perfect in its way. Though we may not all like the nude or half nude figure to be the focal point in a landscape or seascape, we cannot deny the grace and light with which this artist's figures seem to clothe the landscape in which they appear. The picture of "June" is a very personification of light and air owing to the wonderful figure in the foreground. The assured grace and ease of Mr. Russell Flint's work must make a strong appeal to the public, but it is, we suppose, a fact that some of the thankless public find even perfection a little cloying.

THE RENAISSANCE OF ROMAN ARCHITECTURE.*

THE Renaissance, that strange return of Western civilisation upon the art and learning of an earlier time and vanished race, affected the several peoples of Europe more or less profoundly according to their national characteristics and to their physical nearness to the centres of the movement in Florence and in Rome. The enthusiasm for the revival of learning may have been as intense in France and England as it was in the native city of Michelangelo, but the opportunities for direct study of Roman buildings were limited in France and practically non-existent in England. It is matter for little surprise, therefore, that the architecture of the Renaissance in France differs very considerably from that of Italy, or that its manifestation in England should include features unknown in France. There can be no doubt, however, that the architects and students sincerely believed that they were working along the lines laid down by the mighty Romans, and that they were recovering for the world an inestimable treasure in publishing so much antique regularity and beauty.

Sir Thomas Graham Jackson's third volume on the Renaissance of Roman Architecture traces the course of the movement in France, where from first to last a distinctly French trend of thought unconsciously modified the results of imitation of the antique. Of the early period Sir Thomas writes: "And yet the patrons of art at the beginning of the sixteenth century, while they were only trimming their Gothic buildings with scraps of Classic ornament, seem to have thought they had caught the true spirit of the Renaissance. . . . Geoffroy Tory, indeed, boldly claims that the French had surpassed their teachers and their models. In the preface in his edition of Alberti's book *de re* Œdificatoria, published in 1512, he says: 'Our ancestors, as everybody knows, were content with good work, and built with little art and elegance. . . . But at length we have woken up, and our buildings are now renowned everywhere. Indeed, since that magnanimous king, the terror of all Italy, Charles VIII, returned as a glorious conqueror from Naples, the art of building in the beautiful Doric and Ionic style, which is also that of Italy, has begun to be practised among us with great success. . . . You may see, I say, buildings so beautiful and so perfect that the French architects are judged to surpass not only the Italians, but their teachers, the Dorians and Ionians.'"

The artists of the Renaissance seem to have lived in an atmosphere highly charged with the idea of the solemnity and importance of their functions as purveyors of the true Roman manner, and popular approval, blind to the humorous side of this pompous standpoint, confirmed the artists' estimate. It was only to the alert mind of a Shakespeare that the masquerade appeared in its true light. Himself an actor, Shakespeare knew the limits of make-believe, and amused himself and his audience with more than one commentary upon this Classic play-acting taking itself seriously. But if the early Renaissance in France differs obviously from that of Italy and still more from the Roman works, the later work still betrays the admixture of Gothic feeling with the Classic tradition. The outstanding perfection of French masoncraft affected the growth of the new style just as it had permitted of the development of a vigorous style of Gothic, in which the scientific economy of material had been carried to extremes.

Where the Italian buildings were often constructed of brick and stucco without any structural emphasis, the French seldom allowed the imitation of antique form to obliterate this legitimate interest in construction. The famous external spiral staircase of Blois, illustrated in Plate VIII, indicates the mastery at an early period of all the intricacies of stone cutting applied to a design purposely composed to exploit them, together with the newly introduced Classic detail. The spirit of the work is Gothic and distinctly French, and this character was to persist even in later buildings, and despite the presence of Italian artists invited to the court of Francis I. The courage of these great masters in claiming to rival or surpass the works of antiquity is brought out in the account of Cellini's silver Jupiter retold in the book: "Another great Italian master, Benvenuto Cellini, arrived in 1540 and stayed in France till 1545. He produced many vases and figures for the King and a famous saltcellar of gold, but made an enemy of Madame d'Etampes, the King's mistress. He fell out also with Primaticcio, whom he threatened to murder, and after a stormy career escaped to Italy, throwing up his commissions. . . . He tells an amusing story of triumph over his enemy, Madame d'Etampes, who made him produce his silver statue of Jupiter in the Great Gallery, where she had assembled all the casts from the antique in order to put his work to shame; but by a trick of lighting he showed up his statue to such advantage that the King said whoever made this arrangement has done Benvenuto a great favour, for his works not only bear comparison with the antiques, but surpass them."

The French people did not take kindly to foreign artists, and though at a later date Bernini was expressly invited to Paris to design the new buildings of the Louvre, the work was ultimately given to Claude Perrault, through the astute wire-pulling of his brother Charles and Colbert, whose management of the King (Louis XIV) was as brilliantly successful as it was unscrupulous. Bernini returned to Italy enriched with presents, but disgusted with his treatment as an architect, since his magnificent scheme had hardly been considered for a moment. To this day the term Italian is used among French architects to denote an irregular mode of design not worthy to be called French. Perrault's design for the Louvre was far nearer the Classic model in its splendid simplicity than most French work that had preceded it, and he abandoned one of the most persistent of French architectural features—the high-pitched roof. The masonic tradition, which had showed itself in *tours de force* of interesting detail at Blois and in the works of Philibert de l'Orme, reappeared in the Louvre in the use of enormous blocks of stone, recalling the veritably megalithic buildings of antiquity. The tympanum and sloping cornices of the central pediment were so huge as to demand special contrivances for raising them to their positions in the building. The construction has not the directness and simplicity of the old post and beam arrangement of Classic times, however, for the entablatures are composed as flat arches, and not as lintels.

Masonic skill and the pride of the purist in Classic style reappear in the famous church of S. Genevieve, now better known as the French Pantheon, and inscribed to the memory of the great men of France. If in the early days of the Renaissance the difference between the local work and the ancient model had been obvious at a glance, the difference still exists in this beautiful building, designed in the light of personal study of the antique by one of the ablest of French architects, Jacques Germain Soufflot. It is known that the design was inspired by the intention to build in accordance with reason and with the purest Classic models, but the legacy of Gothic times, manifesting itself in over-daring economy of support beneath the central dome, introduces a feeling of lightness totally foreign to the aspect presented by antique buildings, where scientific economy of abutments was so well disguised under the surface treatment of colour and coffering as to reveal itself only to serious study.

Encouraged, perhaps, by the precedent established in England a century before by Sir Christopher Wren, who had recommended scientific economy in construction both in his writings and in his executed work, Soufflot set himself to produce in stone a masterpiece of delicacy and good proportion.

The load of the central dome is borne by four triangular piers originally planned to line with the columns of the nave, but strengthened since the erection of the building with added pilaster strips when cracks in the masonry demonstrated the insufficiency of material to resist the stresses imparted by the load and wind pressure of the high dome.

The vaulting is freely pierced with interpenetrating barrels, and appears almost unreasonably fragile in respect of its own internal thrusts, without taking into account the disturbance due to the unequal loading on certain parts occasioned by the pressures from the central pile of drum and dome. As Sir Thomas writes, "the four great arches that carry the drum seem perilously weakened by being pierced with openings at their springing." In criticising the external appearance of the church he compares the dome with those of the great cathedral churches of London and Rome, and finds the French building less pleasing in its arrangement. "The drum is surrounded by an evenly spaced colonnade, with no breaks and no connection with the solid structure within it. At St. Peter's, St. Paul's, and the other great domes in Paris this is not so, but the colonnade breaks back at intervals to form buttresses to the walls of the drum, with a satisfactory effect both æsthetic and constructional. At the Pantheon the colonnade is useless, a mere screen, a sort of fender slipped over the drum, an unreality and meaningless, a mere piece of pictorial architecture. As one looks at it one can even see the light through the colonnade at the sides." The author does not go on to state, as he might have done, that this external drum and colonnade are supported by four colossal relieving arches spanning respectively the whole breadth of the church and transepts, and which are buttressed by the great external walls of the building, whose height and severe plainness he has just commented upon.

Notwithstanding the many excellent books that have been written upon the subject, Sir Thomas Graham Jackson's work makes its own appeal as a concise and eminently readable work. The illustrations are clear, and those reproduced from the sketches of the author and his son are of interest also as examples of faithful delineation in pencil and in colour.

The printing of the colour plates, always a difficult and anxious matter, has been markedly successful.

* By Sir Thomas Graham Jackson, Bart., R.A. Part III: France. (Cambridge: University Press. Price 42s. net.)

An Ancient Castle.

The historic border stronghold, Croft Castle, Herefordshire, with 500 acres of surrounding lands, has been purchased by the trustees of Sir James Croft. The property thus goes back after a lapse of nearly two centuries to the family that had owned it from the time of Edward the Confessor until 1730. In 1730 the Castle, with the estate, was sold to Richard Knight; the next owner was Thomas Johns, the translator of Froissart's Chronicles, and then it went to Mr. Somerset Davies, M.P. for Ludlow, by whom it was largely rebuilt.

THE WEEK IN PARLIAMENT.

WESTMINSTER.

Sanction for Schemes.

Mr. Trevelyan Thomson asked the Minister of Health whether any schemes submitted to his department for the erection of houses by local authorities under the subsidy provided by the Housing, &c., Act, 1923, had not been sanctioned; and, if so, what were the reasons for such refusals?

Lord E. Percy, Parliamentary Secretary to the Ministry, said that approval to proposals for building by local authorities had generally been given for such number of houses as would be rapidly completed by the building labour available in the district. In a number of cases it had been necessary, in view of the amount of work in hand or the lack of essential skilled labour, to limit immediate approval to an instalment of the local authority's proposal, the principle being to get houses actually built and occupied as quickly as possible.

Grants for Slum Clearances.

Replying to Mr. Gilbert, Lord E. Percy said that 86 local authorities were undertaking, or had under consideration, schemes for the improvement of slum areas, and the annual Exchequer contribution towards the losses on these schemes would be approximately £127,000. The largest contribution would be made in the case of the London County Council, who contemplated schemes involving a total annual loss of £100,000, of which half would fall on the Exchequer. A number of those schemes had already been confirmed. Schemes of considerable magnitude were also proposed by a number of the more important county boroughs, notably Liverpool and Manchester.

Schemes Approved.

Replying to a number of questions, Sir Wm. Joynson Hicks said that 57,830 houses were provided for in schemes approved under the Housing, &c., Act, 1923, and of these 26,705 were to be erected by local authorities and 31,125 by private enterprise. Under the Housing, Town-Planning, &c., Act, 1919, 9,082 houses were either in course of construction or had not yet been commenced. According to estimates based on returns from local authorities there were, in addition to this, not less than 36,000 houses in course of construction under the new Act, for which no subsidy would be payable, from which it appeared that private enterprise was fulfilling its proper duty. The total number of houses in course of construction on September 30 last was over 50,000. He had had to defer approval of many houses on account of the scarcity of building labour, but he confidently anticipated that the number of houses of all kinds built within 12 months of the passing of the new Act would, nevertheless, approach 100,000, which was greater than any number since 1909. 9,756 houses were included in schemes of Rural District Councils which had been approved under the new Act.

The Subsidy.

Replying to Mr. McEntee and others, Sir Wm. Joynson-Hicks said that, where a local authority obtained approval of a scheme for granting assistance to private enterprise in anticipation of the passing of the Housing Bill, and in pursuance of that scheme had undertaken to give assistance, any houses to which such undertakings applied would by virtue of Section 2 of the Housing Act be eligible for grant. He had also undertaken where assurances had been given by or on behalf of local authorities, on the faith of which builders had proceeded with building, in anticipation of the approval of a scheme for assisting private enterprise, to pay the equivalent of the Government grant under the Act in respect of houses which would otherwise be eligible for assistance. Houses, the construction of which was begun in the absence of any such assurance, would not be eligible for assistance.

Inhabited House Duty.

Lt.-Col. Guinness (Financial Secretary to the Treasury), informed Mr. D. G. Somerville that the collection of Inhabited House Duty on the new scale would not commence until next month.

The Dissolution.

Parliament was dissolved on November 16.

BRISTOL HOUSING.

THE letter on the subject of the housing shortage by Councillor F. E. White, of the Building Operatives' Union, published in the Bristol papers, has elicited a reply from Mr. A. Pitt, Secretary of the Bristol Association of Building Trades' Employers, who says that in connection with the statement that by the adoption of the scheme of direct labour more houses would have been built, and a saving effected, there are one or two points that should be ventilated. Houses were erected by direct labour, and, according to a statement made by the responsible city official, a saving of £23 per house effected. But in arriving at this figure no addition was made for establishment or overhead charges. Such charges on a house costing in the neighbourhood of £800 would be considerably in excess of the amount of the alleged saving, so that far from any relief of rents or rates being effected the houses built by direct labour actually cost the ratepayers more than those erected by the building contractors. Direct labour had its opportunity in the building guilds, but was found wanting. The guilds paid a few shillings in the £, and left their contracts, running into an immense amount of money, to be finished by the contractors they were designed to do without.

Mr. Pitt says that the members of his Association, realising the urgency of the demand for houses, undertook to build any number in the city, and were willing to erect on a basis of 7½ per cent. above actual cost, this to include both profit and overhead and establishment charges. Many prominent and responsible members of the Association are still willing to undertake the work upon this basis, provided they have the whole-hearted co-operation of labour.

Mr. Pitt goes on to say that it is suggested that if concerted action could be taken with a view to securing the necessary supplies of materials for housing purposes upon equally advantageous terms, the cost of houses to the city could be brought to an irreducible minimum. To solve the problem needs the co-operation of all parties concerned—the builders, the merchants, and the operatives—but there must be a distinct understanding that no attempt will be made to inflate the rate of wages paid upon such work beyond the standard laid down by national agreement. This more than any other cause has been the reason of any diffidence shown by builders to undertake the erection of small houses upon the scale which the demand necessitates, and the action of the operatives in this direction has been largely responsible for the position that Councillor White suggests when he states that only the better class properties, for people who can afford to purchase, are being erected.

In dealing with the supply of skilled labour, Mr. Pitt says that there is room in the city for a greatly increased number of bricklayers and plasterers. Speaking from the employers' point of view, it is a fact that many contracts are being withheld simply for this reason, and the anomaly exists of every skilled man being fully employed while the building industry of the city is by no means fully extended. Mr. Pitt mentions that the Unions strenuously opposed the Government scheme for absorption of 50,000 able-bodied ex-Service men, up to the age of 30, into the trade, neither would they agree to the promotion of semi-skilled builders' labourers to the ranks of the skilled artisans, thus making room for ex-Service men in the industry as labourers. Several members of the Association were willing to promote some of their labourers in this manner, and pay them full craftsmen's wages, but were prevented from so doing by the action of the Trade Union members, who refused to work with them. This notwithstanding that prior to the war the principal recruiting ranks of bricklayers and plasterers was from the labourers employed by speculating builders.

Mr. Pitt concludes his letter with the comment that enough has been said to lay before the public both points of view. No progress will be made by a policy of recrimination, but if employers and employees are prepared to co-operate in an honest endeavour to secure the erection of the houses so urgently needed, and the authorities are prepared to entertain the proposals, a solution of the housing problem should not be outside the range of possibility.

RENAISSANCE TOWN PLANNING.

THE fifth of the series of lectures on Town Planning, given by Mr. William Haywood, F.R.I.B.A., at Birmingham University, was entitled "Renaissance Town Planning," in the course of which the lecturer said the earliest contributions of the Renaissance to town planning appeared in the geometrical association of great palaces and mansions with their immediate environment. In towns, great buildings were placed as the culminating features of public squares, with which they were designed in balanced composition. On the outskirts of cities, or beyond their boundaries, these formal settings were frequently extended over gardens of gigantic scale, with a free display of that feeling for comprehensive planning which was so characteristic a feature of the period.

Churches also were designed with a formal environment, notably St. Peters, which was associated with the magnificent atrium and colonnaded piazza built by Bernini in 1661. A contemporary design by Carlo Fontana, for prolonging the axial composition of the group to the Tiber by an adjustment of the present road approaches, also illustrated the trend of Renaissance ideals.

It was natural to compare the several features of the Vatican group with those of the old fora of the Empire. In both there was the great colonnaded piazza or Forum, with the church—or its equivalent temple—on the main axis; and the same absence of concern for a medley of neighbouring streets; while the palace of the Popes stood in relation to the stately planning below, much as the palaces of the Cæsars stood on the Palatine above the old fora. St. Paul's, London, might be quoted as having about it the slight remains of Sir Christopher Wren's great scheme of 1666, which, to a large extent, was pivotted on the cathedral.

It was chiefly to Pope Sixtus V (1585–89) that Rome owes its present aspect. He restored the water supply and so made habitable large areas of the higher town which had lain waste since the aqueducts were destroyed. He directed his architect, Fontana, to plan new roads for the development of these abandoned areas; and for the first time in history there appeared certain elements of planning for cities which were conceived in a manner suited to modern needs.

The Piazza del Popolo was the chief feature of Fontana's scheme of roads. It was associated with the northern gate of the city walls, and—outside the walls—with the Via Flaminia, the old military road to Rimini. Three main arteries diverged from the piazza towards widely separated sections of the town, just as roads entering a great city should do; or, indeed, as roads should diverge from any point of traffic concentration, whether it were a bridge head or that modern equivalent for an old city gate, a railway terminus.

The Piazza del Popolo was essentially a traffic centre, and as such it initiated a new use for public squares, which from this time onward tended more and more to abandon the earlier and more exclusive character which was seen in the Place Royale, Paris, 1600, and the Place Vendôme (as originally planned about 1700).

THE BUILDING TRADE.

THE COST OF BUILDING.

By T. P. BENNETT, F.R.I.B.A., Hon. F.I.O.B.

It is certain that there has never been a time in the history of building when cost was so vital as it is at the present moment. Not only are building prices abnormally high (as are all other prices), but owing to the ever-present possibility of further variations and to the fact that building means the outlay of a substantial amount of capital, every building owner feels anxious about laying out his money. These factors make it incumbent upon everyone connected with building to reduce prices to a minimum, a necessity which, on account of limited possibilities, is more acute in housing than in any other class of building. Designs, therefore, must include only absolute necessities. Planning must be as close and economical as possible, specifications must be worded with extreme care, lest by some means a clause may be interpreted to cover an unexpected and unwanted outlay. There may well be differences of opinion about the irreducible minimum of accommodation, and while all public-minded men wish to house the population as well as possible, they realise that there are monetary limits which cannot be passed without disastrous financial consequences. On the other hand, financial housing enthusiasts have endeavoured to use a large variety of semi-permanent materials solely because of their comparatively low initial cost. They have sung the praises of timber construction, and even corrugated iron and matchboards. This welter of effort suggests that such materials have never before been tested, that there is no real reason for sound building, and that any gimcrack structure which can show a low erection price is to be welcomed with open arms. Such an attitude is as insidious as it is fallacious. The wood enthusiasts must be reminded that the Fire of London in 1666 was largely the result of timber buildings, that all collections of timber houses are potentially open to destruction by fire, and that there are very practical reasons for erecting fireproof houses. Timber is also liable to decay, is expensive to maintain, and by reason of the spaces between the supports in a cheap structure it is liable to harbour vermin. Corrugated iron and other purely temporary materials, besides their high cost of maintenance, are generally unsightly, and in initial outlay do not save sufficient to compensate for these defects. The cost of housing, therefore, first resolves itself into the necessity for striking a balance between the qualities of permanence, low maintenance, and attractive appearance with a capital expenditure which is within the means of the majority of the working members of the population. This is the problem which *The Builder* Cost of Building Competition endeavoured to solve, or if solution could hardly be hoped for, in the limits of one undertaking of this character, then to provide a solid advance upon previous knowledge which would bring solution appreciably nearer. The designs chosen in the first competition were sound and economical. They had reasonably compact plans and simple elevations. They were a reflection of current ideas in housing, and must therefore be regarded as typical of current thought upon these matters. Copies of these designs were circulated to 344 competitors who were builders, and who in a fresh competition priced detailed bills of quantities, and endeavoured to show the lowest reliable price at which such houses could be built. By the enterprise of *The Builder* and Messrs. Rownson, Drew & Clydesdale, Ltd., of Upper Thames-street, E.C., who found the prize money in both competitions, an analysis of a large number of prices for typical small houses is therefore possible, and by this analysis more accurate information should be obtainable about cost than has yet previously been available. If this information can be presented in a concise form and in such detail that it indicates clearly the direction in which expenditure occurs, it will be invaluable to architects and housing authorities, and will be a permanent guide to the erection of economical buildings, and should indicate the limits of cost imposed by permanent brick structures.

The analysis which is now being made will, therefore, commence with a comparison of the area of stairs and passages with the effective areas of rooms, and of the latter with the length of walls needed for their enclosure. By this rough guide it will be possible to see how far the designs themselves are economical. The specification as embodied in the quantities will next come under general review, and later will be subject to comment by builders in various parts of the country, so that local practice and experience can be collected for the common information of all engaged in housing. By this inquiry amongst builders many details will be discussed which may perhaps yield valuable results. All architects and builders, whether they took part in the competition or not, are invited to give their comments and opinions, and all opinions which are of sufficient interest will be incorporated in these articles. It is impossible to over-estimate the value of such collective knowledge and experience. The priced bills of quantities which have been received in the competition provide much that is of value, one of the most important features being the proportion of the total cost which is absorbed by each individual trade—*i.e.*, bricklayer, drainage, carpenter and joiner, plasterer, plumber, etc. By plotting graphs showing these amounts, their relation to the whole will be seen at a glance, and the main sources of expenditure having thus become evident, it should be possible to watch these items in future schemes. Individual items in many cases are most illuminating, likewise the prices given by different competitors for the same work. Such items as excavation, wheel and deposit, concrete in foundations, tile roofing, treads and risers, casement sashes and frames, lath and plaster on ceilings, knot, prime, stop and paint three coats, etc., will appear under this heading.

The detailed examination of the cost of materials will next claim attention. Materials may be expected to vary, owing to efficiency in buying, to expert knowledge of markets, to the locality, transport, and other matters, and a study of these variations, with perhaps some published prices, should be of immense value, especially if they indicate that some channels of supply are unmistakably cheaper than others. A chart of these variations will be given. Prices per ft. cube and per ft. superficial of floor area are valuable to the architect, and when these are sub-divided into trades or portions of trades they may help to provide a more accurate means of estimating than is the case with ft. cube estimates without the help of such sub-divisions. The dissection of the structural item is a further point which will add to present knowledge, so that it should be possible to say that houses such as those under discussion could be built as barn-like structures, without facings, skirtings or any amenities whatsoever will cost a certain lump sum and a certain price per ft. cube. The architect and building owner by this means will know the minimum cost of the shell of the structure, and by the exercise of intelligent knowledge and judgment will be able to decide upon the amount of enrichment that is permissible or which has been added, and so may know what they should pay for completed houses. Labour rates may next be examined, or at least referred to, as there is considerable variation in different parts of the country, and also because, as is well known, the best and most enterprising craftsmen tend to migrate to the larger towns and London.

Finally, there is the question of the extent to which extraneous and apparently irrelevant matters affect the cost. Under such headings are (1) the existence of an architect, and (2) the existence of a bill of quantities. There seems little doubt that in country districts builders fear that the architect will demand an unreasonable amount of finish, and will delay the work while making decision and supplying details, or will in other ways increase the cost, and that tenders will in consequence be higher. The bill of quantities, with its multitudinous detail, has similarly an effect upon small builders, and causes them to increase their tenders, partly because they fear its rigidity of detail, and partly because they are not in the habit of dissecting their prices so finely, and consequently price the items inaccurately. Wide variations are found in the cost of individual items and in the total amounts of the tenders submitted. In some cases these variations are understandable, but in general their amount is inexplicable. It is not too much to say that such large differences in price should be impossible when dealing with a perfectly straightforward pair of houses supported by an accurate bill of quantities. These big variations can presumably arise only from inaccurate knowledge, inability to dissect prices, or to quite abnormal local conditions. If every estimator had the amount of knowledge of his job that he should have, and if materials were of average prices, the amount of difference in the tenders should be less than half as much as it is. It may be that examination of these tenders will show where some of these great fluctuations exist, and if this should prove to be the case, and the disparity were only partly removed in future work, the result would be of extreme benefit to the industry and to individual builders and architects. It is, of course, evident that a certain amount of variation will always exist owing to the difference in the standard of workmanship which is put into the work. The acceptance of a standard lower than the best must remain a matter of judgment, but there is no doubt that a lower standard is possible in small houses than in large West-end buildings. It is, and will remain, a matter of difficulty to define an acceptable standard, and almost inevitably this becomes a matter of practice between the architect or building owner, and the individual builders who are asked to tender. It is beyond question that more accurate methods are necessary in every department of building, and that technical education and the stern necessities of high building costs and fluctuating prices are bringing these methods into existence. A competition of the kind now under discussion and analysis does much to draw the attention of the industry to these matters and to elucidate them. It is impossible to set too high a value upon such a competition, or to stress too much the need for careful and accurate work and the extension of the knowledge of the industry of the cost of modern building. This extension of knowledge has a twofold object. (1) It enables the architect to estimate closely and the builder to tender accurately, and thereby avoids difficulties for the former and bankruptcy for the latter. (2) It increases the confidence of the public in build-

ing and in architects and builders. Confidence creates work, because even if prices are high the client will often build if he feels that they are accurate and reasonable, and that he has not been misled by false information or lack of ability. The one important item that cannot be accurately shown by figures, or even accurately gauged by the builder, is the output of the operatives. All who have had charge of building must at times have been exasperated by the conversational habits and general slackness of many of the so-called skilled men who are employed. They must similarly have deplored the inability of the builder suitably to reward the really industrious workman. At times it almost seems as if the indolent flourish, and gain the rewards intended for their more conscientious colleagues. These articles are, however, an attempt to analyse cost, and the only excuse for a passing reference to output is its influence on cost and the indefinite value which must be assigned to it. Cost is also affected by work which, by its unusual or restrictive nature, absorbs an abnormal amount of labour. Such conditions cannot, however, be said to exist in the houses under discussion, and the matter is therefore left with only a passing reference. It is evident that in a subject so large, and attending which there are so many contingencies, finality can hardly be reached, but it is equally certain that much can be done to throw light upon a difficult matter, and that the competition may have very valuable results in this direction.

BUILDING MATERIALS MADE OF WASTE MATERIALS.

THE last of a series of lectures by Professor A. P. Laurie, Professor of Chemistry to the Royal Academy, was given at the Royal Academy of Arts on November 21.

In the course of his lecture Professor Laurie stated that he originally intended to confine his lecture to the subject of the title, but he found himself drawn into dealing with the whole matter in a wider aspect. We had in this country large accumulations of blast-furnace slag, cinders, clinker, and, in the neighbourhood of Edinburgh, of burnt shale, the residue from the stills of the oil industry. There were three ways in which these materials might be utilised: for the production of bricks, for the production of cement, and as aggregate mixed with Portland cement or plaster of Paris. The general method adopted for the production of bricks was known as the sand lime process, because in the first instance it had been applied to the manufacture of bricks from sand. Briefly, this process consisted of mixing the aggregate with a certain proportion of lime and water, squeezing it into a brick under very heavy pressure of some two hundred tons to the area of the brick, and then steaming under high pressure or in open steaming chambers. Bricks were now being manufactured by this process from sand, blast-furnace slag—granulated by being run while hot into water—clinker, town refuse, slate dust, and burnt shale. Cement was being manufactured by two of the Scottish steel companies from blast-furnace slag, granulated, mixed with lime, and then raised to a high temperature, so as to form a clinker in the same way as ordinary Portland cement was manufactured. This cement, known in Germany as iron cement, could be sold in this condition, or could be finally ground with a mixture of a certain proportion of raw blast-furnace slag. In addition, Professor Laurie made the suggestion to the Board of Scientific and Industrial Research, which has been followed up, with the result that they were of opinion that a very useful cement could be made of the burnt shale of the Scottish oil-shale dumps by merely grounding with a certain proportion of slaked lime. The uses of these materials as an aggregate opened up the question of how far it was possible to reduce the content of Portland cement and, at the same time, get sufficient strength for building purposes. The objection to the usual building slab made of cement was that in order to remove it from the machine as soon as made the content of water had to be kept low, and, consequently, the crushing strength of the finished slab was also low. Two interesting methods of getting over this difficulty had recently been brought to his notice: one, the Crozite method, by which the cement bricks were sliced off from the bottom of a column of cement and aggregate; and the other, the method of the Triangular Construction Company, in which a heavy compression was put upon the bottom and top of the slab at the moment of completion. It had been possible in the case of the slabs made by the Triangular Construction Company to reduce the amount of cement to one to twelve of aggregate by their method of manufacture, and the manufacture of cement bricks by the Crozite process was being carried on on a large scale in America.

The lecturer, having illustrated the Crozite method of manufacture by means of slides, proceeded to say that it might seem out of place to introduce the subject of plaster of Paris into a lecture on waste materials, but the building industry was confined in practice to two cementing materials—Portland cement and similar preparations, and plaster of Paris—and many waste products, such as sawdust, disintegrated wood, and ordinary cheap aggregates, such as clinker, could be utilised in slabs made from plaster of Paris. We had large and easily available deposits of gypsum in this country, but the industry had never been developed on the enormous scale which was found in America, and in which all kinds of materials required by the builder had been turned out made from plaster of Paris as the cement. This was due to the adoption in America of up-to-date methods of mining, of handling, and of heating the raw gypsum.

In conclusion, the lecturer expressed his thanks to Mr. Weller, of the Department of Scientific and Industrial Research, for his assistance in getting information for this lecture.

RENT INCREASE.

A VERY important decision has recently been given in the case Bourne *v.* Litton (*Weekly Notes*, November 10). The plaintiff was seeking to obtain possession of his house on the ground that certain sums due for rent had not been paid. He had purchased the property by contract on July 27, 1920, and under that contract it had been assigned to him on August 8, 1922. The defendant had been the tenant of his predecessor in title, and the agreement under which she held would terminate on September 29, 1922. On August 24, 1922, after the property had been assigned to him, the plaintiff had given the defendant notices of increased rent claiming 15 per cent. under section 2, subsection (1) (*c*), and an increase of 15 per cent. under paragraph (*d*). That paragraph provides as to increases of rent: "In further addition to any such amounts as aforesaid (*i*) where the landlord is responsible for the whole of the repairs an amount not exceeding 25 per cent. of the net rent, or (*ii*) where the landlord is responsible for part and not the whole of the repairs such lesser amount as may be agreed, or, as may, on the application of the landlord or the tenant, be determined by the County Court to be fair and reasonable having regard to such liability." By the agreement of tenancy the defendant, the tenant, had to keep all gutters, stack pipes, water-closets, gullies and cisterns clean and in good sanitary condition, and to keep in repair all window glass, sash lines, and internal taps and pipes, and also to maintain and keep in repair all venetian and other blinds.

The defence to the claim for possession was that as the landlord was not responsible for the whole of the repairs, the amount claimed for rent was in excess of that permitted by the Act, and it was contended that the notice was invalid because under paragraph (*d*) there was no agreement as to the amount by which the landlord was entitled to increase the rent and in default of agreement no determination by the County Court of the amount.

The plaintiff relied upon certain correspondence which had passed between the solicitors of the parties which it was alleged amounted to an agreement of the amount at 15 per cent. under paragraph (*d*).

The Court held that a landlord who was responsible for only part of the repairs was not entitled to serve a notice of increase under paragraph (*d*) until the amount he was entitled to claim had either been determined by agreement, or by the County Court in default of agreement, and that as in this case at the date the notice of increase was served there had been neither an agreement nor a determination of the amount by the County Court the notice was invalid, and that an agreement between the parties after the notice was served did not make the notice valid; therefore, even if the correspondence referred to did constitute an agreement the notice was invalid, and judgment was given for defendant.

Every decision under the Rent Acts seems to open up a new vista for litigation. Thus the present decision shows that nice questions may arise as to what is intended by the expression, "the whole of the repairs." In this case the repairs to be undertaken by the defendant were internal repairs of a very small description, such as might well be imposed on the tenant even under a lease in which the landlord practically was responsible for repairs in the general acceptance of the word, and thus the question arises to what extent trifling repairs placed upon the tenant will operate under the above paragraph? Apart from the window glass, the repairs in this case seem limited to what would be fittings and fixtures, but no question seems to have been raised as to the nature of the repairs. If one small item which can be deemed repair is to fall on the tenant it appears it may be argued that the landlord is not responsible for "the whole," and before he can give a notice of increase he must in default of agreement bring the matter before a County Court or he may run the risk of his notice being held invalid and his proceedings for possession based upon it being dismissed with costs. It really is small wonder that houses are no longer offered on lease while the two-edged sword of the law is held suspended in this manner over the heads of landlords, but the Legislature seems blind to the effects of such legislation. Burdens grievous to be borne have been laid upon the shoulders of landlords to such an extent that the leasing or letting of houses has become extinct. The well-tried and convenient relationship of landlord and tenant has been extinguished; houses free from rent restriction only are offered for sale, and no house once got out of the meshes of rent restriction is ever offered on an agreement or lease again. So intent is the Legislature on rent restriction that it does not see that the letting of houses has been restricted out of existence and that the real profiteering is taking place in connection with the sale of houses in a market restricted by the Legislature in the sole interest of sitting tenants. The landlords of houses already let are brought before the Courts over the simplest matters by statutory tenants, and even an increase in rent under the Acts is hedged round with legal technicalities. This case offers one more example of this—for a landlord must consult a Court before he can claim an increase of rent under paragraph (*d*) unless he can come to an agreement with the tenant, and if the tenant is a "statutory" tenant he will not be willing to agree any matter; besides this, it appears that in every case where the landlord claims an increase in rent over and above the increases permitted by the preceding paragraphs of this subsection, he may be met by the allegation that some trifling repair undertaken by the tenant brings him under the second head of the paragraph as not responsible for the whole of the repairs.

THE HEATING OF BUILDINGS.

ON November 15 Mr. F. Broadhurst Craig lectured before the Northern Polytechnic on "Heating Systems Used in Buildings."

In the course of his remarks he said a good deal of uncertainty undoubtedly existed as to the respective merits and demerits of the different methods of heating buildings, and to his mind the layman's difficulty was in discriminating between the claims of the exponents of the various systems. Broadly speaking, heating systems might be divided into two distinct classes. First, there were those intended for intermittent or occasional use; and second, those of a continuous nature.

In the first category might be placed open fires, slow combustion stoves, gas heating apparatus (including gas fires or gas grates, gas radiators, and gas-heated boilers or geysers), electric radiators, and oil stoves. All these appliances had their own specific uses, but their employment should be limited to small-roomed residences and offices in which occasional heating only was required. The attempt to warm the larger rooms of even a moderate-size building by any of these means was almost certain to result in failure, either on the score of inadequacy or increased working costs.

An ordinary brightly burning open fire would emit approximately 3,500 to 4,000 B.T.U.'s per super ft. of fire surface, and to maintain this about 3 to 3½ lbs. of fuel required to be burnt per hour. Assuming that the coal had a calorific value of 13,000 B.T.U.'s per lb., this gave an efficiency of $\frac{13,000}{4,000} \frac{3.5}{100} = 11$ % only.

Apart altogether from the exceedingly low efficiency of the open fire, it possessed other disadvantages. One of them was the amount of dust it created and the consequent deleterious effect upon decorations and furnishings; and another was the disagreeably cold air currents which it set up from the windows and doors towards the fire. In fact, the area of comfort in most large rooms was appreciably reduced in the winter for this reason. Slow combustion stoves had an efficiency of some 25 to 40 per cent. The surface temperature of the stove was usually from 300 to 400 degrees, and this would transmit approximately 800 B.T.U.'s per sq. ft. of outer surface. The manufacturers of these appliances usually specified the various sizes of stoves which were capable of heating rooms of certain cubical contents, notwithstanding that the calculations for arriving at the quantity of heat in accordance with the nature of the wall, floor, ceiling, and glass exposures indicated that such ratios could only be approximated. A more accurate method of ascertaining the necessary size of stove was first to determine the total number of B.T.U.'s required per hour, as rendered necessary by the requirements of the particular room under consideration. If 8,000 B.T.U.'s were required per hour the stove should have an external surface of about 10 sq. ft., *i.e.*, $\frac{8,000}{800}$ and assuming that the coal had a calorific value of 14,000 B.T.U.'s per hour, it would consume about 1.43 lbs. of fuel per hour.

Gas for the purpose of heating might be employed in three ways: (1) By means of gas fires (or the more recent "gas grates") with asbestos "radiants," which required flues; (2) by "gas-steam" radiators, which did not require flues; and (3) by gas boilers (on the same principle as the ordinary low-pressure hot water heating boilers) heated by means of a Bunsen burner instead of coke or coal. Even the highest claimed efficiency of gas-heated boilers (some 60 to 80 per cent.), when added to the high cost of gas, put them entirely beyond practical consideration for heating where there were more than, say, two radiators, in which event it was preferable to install individual gas-steam radiators or gas fires. The employment of gas fires should be confined to odd bedrooms, offices, and similar rooms in which continuous heating was not required; that was to say, where it was desired to have heat for perhaps only half an hour or so per day, such as immediately before retiring at night, or for occasional use in an office for a short time. For purposes of this kind they were very useful, though at their highest rated efficiency (about 75 per cent.) they could not compare with central heating, even after allowing for their lower initial cost.

Gas-steam radiators were probably the best means of heating by gas. Owing to the absence of a flue the efficiency was, of course, 100 per cent., and the whole of the gas burned was utilised in warming the room. The construction of gas-steam radiators was similar to that of an ordinary hot-water radiator. About one-third of its capacity was first filled with water, which, on being heated by means of the gas-burners beneath, proceeded to boil and produced a similar effect to that of an ordinary low-pressure steam radiator. As a consequence the intensity of heat was not so great, and the disagreeable "baking" effect was not produced in the same degree, though to a certain amount there were obnoxious odours caused by the decomposition and burning of dust particles. Were it not for the gas fumes and the high temperature of the gas flame these radiators might compare favourably with the hot-water type, despite their higher running cost.

The next method of heating was that of electricity. Generally speaking, its advantages were similar to those of gas; that was to say, for intermittent heating or occasional use it was decidedly useful, but for continuous heating it bore no comparison with a centralised system. The objectionable liability to overheat the air of the room was equally inherent in this type of radiator, and it was not to be recommended where expense was a consideration.

The following table showed the relative hourly costs of heating by the various methods before described as compared with a system of central heating. For the purposes of this comparison a room had been assumed requiring, say, 18,000 B.T.U.'s per hour. This number of heat units represented the quantity required to take care of an average school class-room of, say, 20 ft. by 20 ft. by 15 ft. high, with normal exposure, heated to 60 degs. F. when 30 degs. outside.

	Hourly Cost.
Open Fire	2.52d.
Slow Combustion Stove	1.38d.
Gas Fire or "Grate"	3.30d.
Gas Boiler	3.09d.
Gas Steam Radiator	2.47d.
Electric Radiator	10.6d.
Oil Stove	2.52d.
Central Heating by Coke	0.71d.

It should, however, be remembered that the initial cost of any of the before-described intermittent systems was appreciably less than that of central heating. To extend the comparison, therefore, to-day's outside cost of a complete central heating installation might be taken at £20 per radiator. As that of a modern type of ventilating gas-fire grate—with fixing and pipe connections—would average about £6 each, the resultant saving in first cost was approximately 70 per cent. Calculating on this basis for a building requiring, say, twenty radiators, each having a heating capacity of 9,000 B.T.U.'s per hour, the relative initial costs were:

(1) Central heating, 20 at £20	£400
(2) Gas fires, 20 at £6	120
Additional initial cost of (1)	£280

The comparative fuel costs for equal heating periods were:

(1) Central heating: 7.1d. per hour. 12 hours, 7 days per week, 30 weeks per heating season	£374 11
(2) Gas fires: 33.0d. per hour. 12 hours, 7 days per week, 30 weeks per heating season	346 10

It was obvious, therefore, that for continuous employment neither gas nor electricity—and particularly the latter—could be said to compare favourably with central heating. There were other points which should be taken into account where buildings required intermittent heating only. For example: central heating did not lend itself so readily to occasional use, as the boiler could not be turned on or off as easily as a gas fire, though each individual radiator possessed this facility in an almost equal degree. And, again, for an installation of the size assumed in the example, the cost of attendance for stoking, &c., should be added to the running costs. This factor, however, varied so much with the size of installation that accurate calculation was hardly possible. Apart, however, from the two foregoing important considerations of initial and fuel costs, the advantages of central heating were still more pronounced when regarded from the standpoint of comfort, which was, after all, the principal consideration.

It was thus evident that the advantages undoubtedly rested with central heating as compared with intermittent heating, and it was to this system the closest study should be given. Central heating might be defined as a system by which two or more rooms could be heated from a centrally-situated agency, such as a furnace or boiler. The media employed were hot air, steam, and hot water, any of which might be distributed—either by natural or mechanical means—under varying pressure.

A large section of the general public believed that central heating was effected by means of steam, and few were able to distinguish it from a hot-water apparatus. Consequently, those who possessed a wide experience of Continental and American systems were perhaps a little inclined to express somewhat emphatic opinions. Steam was not the generally-adopted medium of central heating in this country. In fact, the extent of its employment here was relatively insignificant. The objections to the adoption of steam-heating media in this country were their inelasticity, whereby the radiators might be either on or off and the boiler worked at the same steam pressure, irrespective of variation in the outside weather conditions, and the consequent lowered degree of fuel efficiency caused by the overheating of the rooms in comparatively mild weather. To these might be added the difficulty of installation (a basement or sunken boiler chamber with pipe trenches was essential to its proper lay-out) and the possibility of disagreeable, noisy effects of "water hammer" arising from faulty design and erection. The numerous mechanical devices which had been applied to steam heating systems—such as automatic air valves, regulators, thermostatic valves, vacuum pumps, steam-traps, separate air-lines, syphons, mercury seals, exhausters, condensation pumps, and what not—all indicated that steam was generally favoured as a heating medium. This, to his mind, was to a certain extent due to the fact that the fundamental principles of low-pressure hot-water circulation by gravity were still but imperfectly understood, particularly in America.

The high-pressure hot-water system had become almost as extinct as that of hot air. It was unhealthy, inelastic, and extremely dangerous in the event of leakages in the pipe joints, and its application to-day was almost entirely confined to drying stoves and the like.

Generally, it could be asserted that on the score of health, facility of installation, and economy—both in initial and working costs—the low-pressure hot-water system was without question the most suitable for the English climate, and it was adopted in fully 90 per cent. of the buildings in which central heating was installed. Notwithstanding the long period during which this system had been employed, it was still so imperfectly understood that its application appeared to be very generally based upon empirical formulæ and rule-of-thumb methods of a strictly orthodox character. The proper design of a low-pressure hot-water heating system called for a greater degree of technical skill and application than that of any of the other systems named.

INSTITUTE OF BRITISH DECORATORS.

"HOW, WHEN, AND WHERE TO USE COLOUR AND ORNAMENT."

MR. WALTER J. PEARSE gave a lecture on the above subject at Painters' Hall, Little Trinity-lane, E.C., on November 15.

The lecturer said that his paper had been written for the painting and decorating trades, and was, therefore, of a somewhat technical nature. For the purpose of his lecture he divided his remarks on colour into four headings: æsthetic, corrective, informative, symbolical. If decoration were not wanted under these headings it was doubtful if it were wanted at all. Colour was demanded when there was a want of visual and intellectual satisfaction. The lecturer said that the æsthetic and corrective use of colour was to separate one object from another. Its informative use was obvious; and its symbolical value was expressed in heraldry. Its correct use, however, did not depend on taste. After all, what was taste? Its correct use depended on reason and law. It did not depend on chance: solid reasons were essential for its right employment. The lecturer wished that our eyes were as susceptible to colour as our ears to music. Although it was sometimes legitimate to have discords in colour, as in music the basic principles were, he reiterated, reason and law. In making the decision where to place colour, however, common sense was necessary. In the case of a door, for instance, it was not desirable to use a hard metallic green; neither was it desirable to use a bluish green. Woodwork should not be painted in a colour unsuited to its material. It was not customary to enamel Chippendale chairs, therefore it was not desirable to enamel doors. In a general scheme yellow was the most satisfactory colour. Even a painting was improved by varnish owing to the yellow tint in the ingredient. A bedroom should have a healthy colour; a nursery be without glare; a billiard-room restful. The lecturer mentioned the case of a painter who used black for a bathroom, and gave as his reason the excellent background it made for the human figure.

Hardness and flatness were the worst faults in the use of colour. Englishmen, the lecturer said, appeared to have a rooted objection to the use of bright colours. As an example he mentioned the Early Victorian and the "greenery yallery" days. Bright colour, however, did not mean crude effects.

The lecturer dealt with decoration and ornament under three headings: æsthetic, wealth, religious expression. Decoration was, he insisted, a combination of colour, line, and form. The right use of ornament depended on a sense of fitness, especially in regard to its use without colour. It was merely common sense that flat ornamentation demanded a flat surface. It was not desirable to place ornamental birds on floor spaces, neither was it desirable to place ornamental fishes on the ceiling; although the lecturer mentioned one case in which he painted fishes on a glass roof in order to represent the bottom of the sea in a ballroom. The bare lines of ornamentation should be filled in first (a sort of "noughts and crosses" arrangement), then the detail work finished. It was necessary to start from the bottom, and build up on a firm foundation. In dealing with wallpaper, it was essential that the flowers or leaves should be of natural size. Daisies should not be the size of dahlias. He mentioned a case where a rich wallpaper consisting of beech-leaves was entirely ruined through the leaves being too large.

The lecturer concluded with an interesting exposition of broken-colour effects; and pointed out that wallpaper possibly owed its charm to this effect. Actual examples shown by the lecturer were certainly extremely beautiful.

A hearty vote of thanks was accorded him at the close.

THE RENT ACT: SIGNING NOTICES OF INCREASE.

ACCORDING to a statement of the Property Owners' Protection Association made to *The Times* recently a point has been raised by the decision of a sheriff in Scotland, a court equivalent to a County Court here, that notices of increase of rent under the Act of this year must be signed by the landlord himself and bear his address, and not by an agent. Of course, under the "Notices of Increase Act, 1923," notices of increase have an added importance, as they also now amount to a notice to terminate the tenancy, but as far as we can see no change has been effected as regards the form of notice. Under the Act of 1920 section 3 subsection (2) it was provided that no increase should be due or recoverable until a certain period after the service of a valid notice "which notice shall be in the form contained in the First Schedule to this Act or in a form substantially to the same effect." Under the Notices of Increase Act "validated increases of rent" must be claimed according to the form in the Schedule to that Act or in a form substantially to the same effect, and the forms under both these Acts so far as the point we are considering is involved are in the same terms, they are headed "Form of Notice by Landlord" and conclude "Signed—Address—."

The third Act, the Rent and Mortgage Interest Restrictions Act, 1923, only touches this point in section 6, for it provides that "the county Court, if satisfied that any error or omission in a notice of intention to increase rent is due to a *bona fide* mistake on the part of the landlord, shall have power to amend such notice by correcting any errors and supplying any omissions therein which if not corrected or supplied would render the notice invalid . . ." and this applies to forms whether served before or after the passing of this Act. So far, therefore, it appears that there has been no change in the form since 1920, and if the signature of agents has been recognised there is nothing in the Acts themselves to alter that practice. On the contrary the latest Act has given a power to the Courts which they did not possess before to amend the forms. But this does not conclude the question, for these forms have been held to be statutory forms which must be strictly adhered to—see Peizer *v.* Federman and Penfold and Thompson *v.* Newman (*The Builder*, December 16, 1921)—and assuming that the form must be signed by the landlord it is doubtful whether the substitution of an agent would be treated as "an error or omission" capable of amendment under section 6 of the Act of this year.

No mention is made in the Acts of agents, and all that can be said in the absence of a decision in the High Court (and we are not aware that the point has ever been raised) is that if the practice has been countenanced ever since rent restriction commenced the legislature has not rendered the forms more stringent, but on the other hand in the provision we have noticed in the last Act has shown an intention rather to relax the cast iron nature of the form by allowing amendment by the Court in certain cases.

TRADE NEWS.

We have received from Messrs. Winser & Co., Ltd., of 62, Buckingham Palace-road, S.W., a copy of their new No. 12 Catalogue of stoneware sanitary appliances.

Messrs. Petters, Ltd., will have, at their usual Stand (No. 10) at the forthcoming Smithfield Show, a representative selection of their latest oil engines and electric lighting sets.

Messrs. W. R. Crow & Son, timber merchants and importers, have now opened new head offices at Norfolk House, Laurence Pountney Hill, Cannon-street, E.C.4 (Telephone, Central 479; telegraphic address, "Bolection, Phone, London"). The firm have also opened a new wharf at Blackhouse-road, Deptford, S.E.8.

We learn that at the Barcelona Trade Exhibition the Gran Medalla de Oro (a gold medal) was awarded to Mr. R. M. Nosworthy, of Calle Valencia, Barcelona, owing to the good quality of the P-V Brand Leather Cloth, for which Mr. Nosworthy has the sole sale for Spain, on behalf of the British Pluviusin Company, Limited, of Manchester, a Nobel Industries concern.

Messrs. George Wright, Ltd., Rotherham, have just issued a little booklet in which are illustrated many fine examples of old Sussex, French, and Flemish fire backs. It is becoming increasingly difficult to find genuine old fire backs in these days, therefore the reproductions of Messrs. Wright will be very welcome. For all practical purposes they are excellent and have all the characteristics of the old ones. The examples are from the Burton Weir collection, which is considered one of the finest in the country.

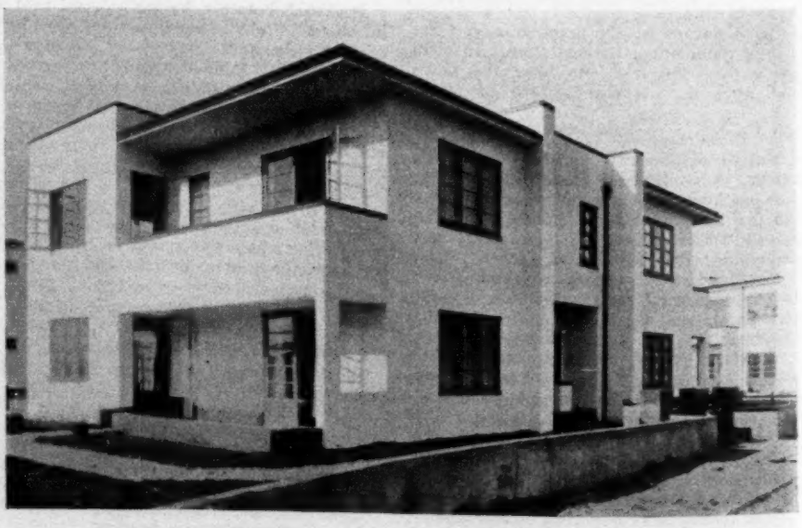


FIG. 1.—HOUSES AT THE HAGUE, BUILT OF "KORRELBETON." (*See p.* 823.)

NEW INVENTION.

A New Concrete and a New Method of Shuttering.

In Holland, as elsewhere, various new methods of construction have been tried, and among those which have been adopted to any considerable extent is a system of monolithic concrete construction invented by Mr. Greve, a Dutch architect, which possesses two special features. The first is the system of shuttering, whereby the walls may be poured complete or for one story at a time at one operation, and the second is the composition of the concrete of which the buildings are formed.

The shuttering (shown erected in Fig. 2) consists of a wooden framework filled in with metal plates, and is placed in position in sections of a height corresponding to that of each story of the building to be erected. This method has the advantage that the shuttering of each story can be removed irrespective of the shuttering of the other stories, so that where several houses are to be built it is not necessary to wait for the whole of the walling of the first house to become set before any of the shuttering is removed. Thus, while the first house is being completed the foundations of the second house can be prepared, and the shuttering from the ground floor of the first house to be erected, which has hardened in the meantime, is then taken down and used to form the ground floor of the second house. Whilst this is being placed in position, the first-floor shuttering of the first house is being dismantled, and is ready to be erected for the second house by the time the ground-floor shuttering is in place. The same process applies to the second or any number of stories, and a considerable saving in time and form-work is effected. Another feature of the shuttering is that the plates can be removed from the framework whilst it is in position.

The concrete, known as "Korrelbeton," is made from furnace slag, broken brick, coke breeze, or other angular and porous aggregate to pass a ½-in. mesh, bound together with Portland cement without the addition of fine material to fill the voids. For walls the proportion of cement and aggregate is 1 : 10, while for floors and roofs, in which case a finer aggregate is used, the proportion is 1 : 5 or 1 : 3. The resultant concrete is exceedingly light and porous (see Fig. 3), and it is therefore possible to use lighter shuttering than in the case of a concrete made with a heavier and more dense aggregate. The voids in "Korrelbeton" equal from 30 per cent. to 50 per cent. of the total volume of the concrete, and this, it is claimed, renders walls built of this material non-conducting of heat and cold, sound-proof, and fire-proof, while at the same time the light and porous concrete prevents condensation and permits of nails being driven into the walls.

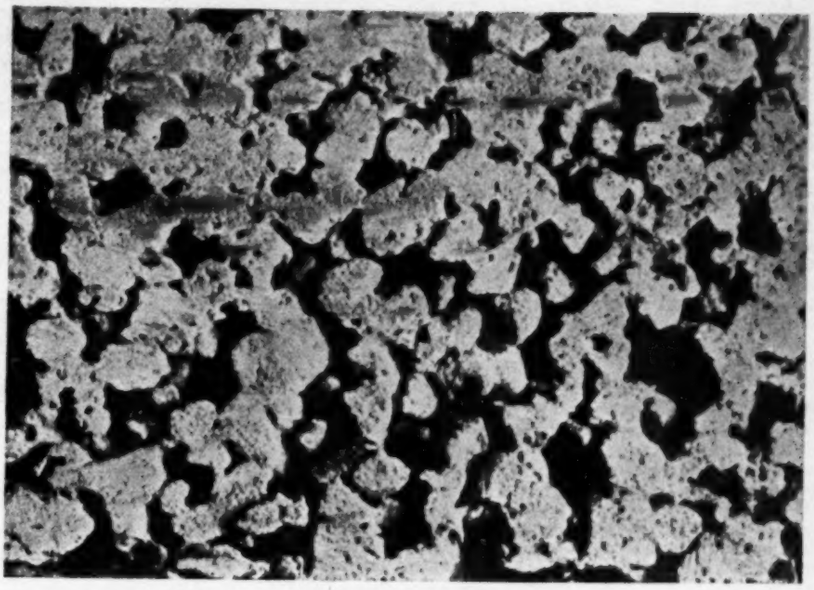


FIG. 3.—"KORRELBETON": ACTUAL SIZE.

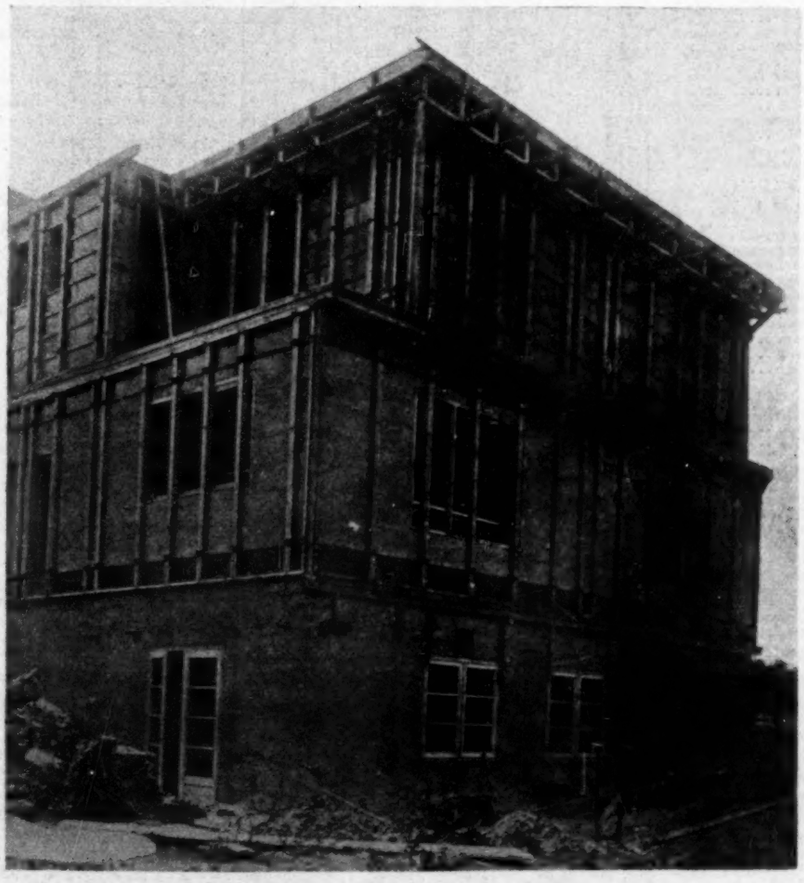


FIG. 2.—SHOWING SYSTEM OF SHUTTERING.

The walls are rendered weather-proof with a 2 in. coating of cement, and plastered internally. No damp-courses are used, and in this connection we are informed that a piece of walling after standing in water for two weeks showed no signs of dampness above water-level. The outer walls are usually 12 in. thick for foundations and 8½ in. above ground level; divisional walls are usually 4 in. thick.

The method of erecting these houses is as follows. A raft foundation is first laid, consisting of a bottom course of 4 in. of "Korrelbeton" with the same size aggregate as is used for the walls, reinforced with a layer of mesh reinforcement laid 1 in. from the bottom, and a top course of 2 in. of "Korrelbeton" made with a finer aggregate containing only from 10 per cent. to 20 per cent. voids, thus forming a more dense and stronger concrete. The walls are then poured up to first-floor level, and the first floor laid on the same lines as the ground floor. The walls are then carried up to second-floor level and the second floor laid, and so on to any desired height.

It is claimed that the economies which are possible by this system, both in the cost of the concrete and the cost of erection, amount to about 20 per cent. as compared with brickwork. The shuttering is standardised in units which allow any architectural design to be followed, and we are informed that between 300 and 500 houses per year can be built with a plant costing £3,000.

Fig. 1 (page 822) shows a pair of houses built at The Hague on this system.

The Director of the Municipal Building and Housing Council at The Hague, and other Dutch and French building authorities, have reported favourably on this system, which we understand is shortly to be adopted on some further large schemes.

We are informed that a test carried out on 1 sq. yd. of "Korrelbeton" 6 in. thick, such as is used for floors, supported at each of the four corners, showed no deflection when loaded with 2,690 lb. in the centre of the slab.

An independent test carried out in London to ascertain the crushing strength of "Korrelbeton" gave the following result:—The sample was between ten and eleven months old, and measured 6.66 in. long, with a sectional area of 5.56 in. by 6.5 in., or 37.03 sq. in. The specimen failed at a load of 10.94 tons, that is, 42 tons per square foot, or 661 lb. per square inch.

Mr. C. R. Bartels, of 36, Duke-street, E.C.3, is the London agent for the system, which has been patented in Great Britain and Holland and other European countries.

CONTRACTORS FOR EXHIBITION BUILDINGS.

SOME correspondents have recently called attention to a difficulty which they say has arisen in connection with contractors who undertake the erection of temporary structures in buildings which are used for exhibitions or other like purposes. In such cases they say that usually an organiser takes a building and either he or his tenants place orders with contractors for the erection of the stands or other like structures, and this work usually occupies from three to six days, a period too short to enable the contractors to protect their employees from cold in winter or to provide lavatory accommodation, and that these conditions cause trouble with the men.

Our correspondents seem to assume that they are liable to provide warmth and other conveniences for their employees, and that the absence of these may give the men a cause of action against them, or that the authorities may even take action. We do not know on what basis this assumption is founded, as it certainly does not apply to men engaged on ordinary building operations where the provision of warmth would be physically impossible, and therefore we imagine that if any such obligation arises it can only do so out of the particular contract between the contractor and his men.

Our correspondents then suggest that, as it is impossible for them to supply warmth and conveniences on these short-term contracts, the person who places the work with the contractor must be liable for their provision and, further, that if the lack of them leads to a strike amongst the workmen compensation or damages should be recoverable from the person putting out the contract.

We cannot here advise on the law, but it appears that the answer to both these questions would be in the negative unless the matter is provided for in the contract between the principal and the contractor. We, however, give prominence to this question because, as it is to the interest of all parties engaged in this class of undertaking that the work should be carried out expeditiously and without friction, those organising such exhibitions may see their way to doing away with a possible grievance or hardship without prejudice to the undertaking; for instance, by installing the heating apparatus, if such is required for winter exhibitions, at the earliest stage in the operations and by seeing that other conveniences are available as soon as possible. So far as we can see any obligation can only arise out of contract both as between the contractor and his employees, and the principal and the contractor, and apart from contract we cannot think the obligations and liabilities suggested can arise.

It would even appear very doubtful whether an "organiser" would be a "principal" liable under the Workmen's Compensation Act to a workman of a contractor who from an unusual and exceptional exposure had contracted pneumonia, and thus had sustained injury by accident under that Act.

Bricklayers and House Building.

The suggestion made at a recent conference of Birmingham building trade representatives, held under the chairmanship of the Lord Mayor, that the workmen should agree to a longer working week, was submitted to a meeting of the operative bricklayers. The proposal was rejected by the trade union members, who definitely decided against any extension of the working week beyond 44 hours.

London Master Builders' Association.

The Council of the London Master Builders' Association has decided, as the polling for the General Election has been fixed for December 6, to postpone the Annual Dinner from that date to December 13.

RATES OF WAGES IN THE BUILDING TRADE.

The following are the rates of wages in the building trade in England and Wales. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur:—

	Masons.	Bricklayers.	C'p'ters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Labourers.
Aberdare	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Accrington	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Altrincham	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Ashton-under-Lyne	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Barnsley	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Barrow-in-Furness	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Barry	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Bath	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Bedford	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Birkenhead	1/9	1/9	1/8½	1/9	1/9	1/9	1/8½	1/4
Birmingham	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Bishop Auckland	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Blackburn	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Blackpool	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Bolton	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Bournemouth	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Bradford	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Brentwood	1/5	1/5	1/5	1/5	1/5	1/5	1/5	1/0½
Bridgwater	1/3	1/3	1/3	1/3	1/3	1/3	1/3	0/11½
Brighton	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Bristol	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Burnley	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Burton-on-Trent	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Bury	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Cambridge	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Cardiff	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Chatham	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Chelmsford	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Cheltenham	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Chester	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Chesterfield	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Colchester	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Coventry	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Crewe	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Darlington	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Derby	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Doncaster	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Dudley	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Durham	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
E. Glam. (Mon. Vall.)	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Eastbourne	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Exeter	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Folkestone	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	0/11½
Gloucester	1/4	1/4	1/4	1/4	1/4	1/4	1/3	1/0
Grantham	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Grays	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/6½	1/2½
Grimsby	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Great Yarmouth	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Guildford	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Halifax	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Harrogate	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Hartlepools	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Hastings	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	0/11½
Hereford	1/4	1/4	1/4	1/4	1/4	1/4	1/3	1/0
Huddersfield	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Hull	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Ipswich	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Lancaster	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Leamington Spa	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Leeds	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Leicester	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Lichfield	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Lincoln	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Liverpool	1/9	1/9	1/8½	1/9	1/9	1/9	1/8½	1/4
Llanelly	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
London	1/7½	1/7½	1/7½	1/7½	1/7½	1/7½	1/6½	1/2½
Loughborough	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Luton	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Maidstone	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Manchester	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Mansfield	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Merthyr Tydfil	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Middlesbrough	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Newcastle-on-Tyne	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Newport, Mon.	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Northampton	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Norwich	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Nottingham	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Oakham	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Oldham	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Oxford	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Plymouth	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Pontypridd	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Portsmouth	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Preston	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Reading	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Rochdale	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Rochester	1/4	1/4	1/4	1/4	1/4	1/4	1/4	1/0
Rugby	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
St. Albans	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
St. Helens	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Scarborough	1/6	1/6	1/6	1/6	1/6	1/6	1/6	1/1½
Sheffield	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Shrewsbury	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Southampton	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Southend-on-Sea	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Southport	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
South Shields	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Stockport	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Stockton-on-Tees	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Stoke-on-Trent	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Stroud	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3	0/11½
Sunderland	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Swansea	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Swindon	1/4	1/4	1/4	1/4	1/4	1/4	1/3	1/0
Taunton	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	1/3½	0/11½
Torquay	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Tunbridge Wells	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Wakefield	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Walsall	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
Warrington	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
West Bromwich	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Wigan	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Windsor	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/4½	1/0½
Wolverhampton	1/7	1/7	1/7	1/7	1/7	1/7	1/7	1/2½
Worcester	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/5½	1/1½
York	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/6½	1/2

(For rates of wages in the Building Trade in Scotland, see page 825.)

THE SCOTTISH BUILDER

NEW BUILDINGS IN SCOTLAND.

Cupar.—RECONSTRUCTION.—The Cupar District Committee have instructed the Clerk to apply to the Scottish Board of Health for a grant for the Fifeshire County Council to reconstruct old houses.

Paisley.—HOUSES.—The Corporation proposes to erect an additional 150 houses at Whitehaugh.——Mr. Matthew Urie, jun., has been granted permission to erect two double villas in Kingsburgh-drive, and Mr. James Maxwell has received permission to build a double villa in Gartmore-road.

Balfron.—SCHOOL.—The Stirlingshire Education Authority has approved of plans for an addition to Balfron School, at a cost of £700.

Glasgow.—RAILWAY.—In connection with the announcement already made that the railway companies have under consideration the question of reconstructing certain railway stations in Glasgow and neighbourhood it is now officially stated that plans for this reconstruction and for developments along other lines have been practically completed. It is expected that work will be commenced shortly on some of these schemes.

Renfrewshire.—HOUSES.—The Building Committee of the Upper District of Renfrewshire have approved of plans as follows:—Bungalow of six apartments at The Grove, Giffnock (South) for George W. Dixon & Son, builders, Giffnock; five semi-detached houses, each of five apartments, at Florence-drive, Giffnock, for Philip Thomasson; bungalow of seven apartments at Alder-road, Hillpark, Eastwood, for J. D. Mares; double cottages, each of five apartments, at Busby-road, Giffnock, for the Southern Building Company; and a bungalow of six apartments at Netherlee-road, Netherlee, Cathcart, for James B. Wyllie & Son.

Rothesay.—HOUSES.—Rothesay Town Council have adopted a housing scheme, subject to approval from the Scottish Board of Health, the amount of the grant to be £100 per house. One condition is that any houses built under the scheme are not let to people having other houses in Rothesay.

Ayr.—HOUSES.—At a meeting of Ayr Town Council it was reported that applications for a subsidy of £100 had been made in respect of 71 houses. The plans had passed the Dean of Guild Court, and were reported by the Dean of Guild to be in conformity with the building regulations under the Housing Act of 1923. The Clerk also submitted a list of 13 persons who desired loans in terms of an offer made by the Council and approved by the Board of Health. It was agreed to grant the applications. With regard to the loans and the rate of interest under the Small Dwellings Acquisition Act the Scottish Office intimated that, subject to the approval of the Treasury, the Secretary for Scotland proposed to issue at an early date a general order fixing 5 per cent. for this purpose. There were objections, it was stated, to the suggestion that a rate to be current for a long term should be based on present ability to borrow for short periods at a low rate of interest.

Dundee.—HOUSES.—Plans and sections of proposed new buildings, &c., have been lodged at the office of the City Engineer as follows:—Crescent-street, additions for Dundee Education Authority; Dalgleish-road and Murray-street, houses for Andrew Rattray; Elgin-street, house for Alexander McLean, house for D. M. Hutchison, house for Mrs. Ruth Leighton; Ellislea-road, Broughty Ferry, green-house for T. L. Miller; Frederick-street, cottages for John Ramsay; Harrow-street, cottage for the Misses Duff; Lamb's-lane, fire escape stairway for Wm. Gavine; Liff-road, Lochee, hut for Lochee Labour Party; Old Glamis-road, house for Rev. J. H. Sharp, porch, &c., for Alexander Lickley, semi-detached villas for H. T. Bowman; New-street, Barnhill, Kerrington-crescent, extension of street for the Earl of Dalhousie.

CONTRACTS, COMPETITIONS, &c.

NO DATE.—**Girvan.**—HOUSES.—Erection of 28 houses (seven blocks) for Town Council. Plans may be seen at office of Burgh Surveyor, Mr. C. Herley, Girvan, or at the architect's, Mr. W. Baillie, 2, West Regent-street, Glasgow. Copies of schedules can be had from the architect. Deposit £1.

NO DATE.—**Stirling.**—TENEMENTS.—For erection of tenements in Broad-street for the Town Council. All particulars from the Burgh Surveyor.

HOUSING PROGRESS IN SCOTLAND.

The following figures show the progress that has been made in State-aided housing schemes in Scotland to October 31, 1923:—

Permanent houses completed.. ..	19,741
Temporary houses completed.. ..	665
Reconstructed houses completed ..	101
Houses completed under the Private Subsidy Scheme	2,287
	22,794

There are 3,063 houses at present under construction in connection with housing schemes carried out by local authorities and public utility societies.

The total amount paid by the Scottish Board of Health in respect of the 2,287 houses completed under the private subsidy schemes is £546,276 13s. 4d.

HOUSING IN SCOTLAND.

In the House of Commons last week, Capt. Elliot informed Mr. D. Millar that according to the latest returns received from local authorities, 20,507 houses had been completed under the provisions of the scheme under the Housing, Town Planning, &c. (Scotland) Act, 1919; 3,063 were under construction; and 1,980 had not yet been commenced. In addition, 2,287 houses had been erected under the Private Builders Subsidy Scheme of the Housing (Additional Powers) Act, 1919. According to returns received for the period to October 31, 1923, under the Housing, &c., Act, 1923, 42 houses were in course of erection by private enterprise with the assistance of subsidies from local authorities; 56 houses were being erected by local authorities themselves under the provisions of Section 1 (1); while 1,098 houses were under construction under the slum clearance schemes of local authorities. Except in the case of the slum clearance schemes (where 166 houses had been completed), no houses had been completed at October 31, 1923, under the subsidy provisions of the 1923 Act.

New Paint Depôt.

Messrs. Thos. Parsons & Sons, manufacturers of varnishes, enamels and colours, have recently opened a quick-service depôt at 476–480, Cathedral-street, Glasgow. The exterior of the premises has been painted in a colour scheme similar to that of the façade at 315–317, Oxford-street, London. The chief feature of this depôt is that several modern paint mills have been installed to deal particularly with urgent orders for special shades of colours in turps, oils or enamel.

Obituary.

The death took place last week of Mr. William Jones, of Geandale, Buckley, in his 80th year. Deceased was the founder of the firm of builders and contractors, William Jones & Son, Buckley.

BUILDING TRADE WAGES IN SCOTLAND.*

THE following are the present rates of wages in the building trade in the principal towns of Scotland. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur:—

	Masons.	Brick layers.	Carpenters, Joiners.	Plasterers.	Slaters.	Plumbers.	Painters.	Brick-layers' Labourers.	Plasterers' Labourers.
Aberdeen	1/7	1/8	1/7	1/8	1/7	1/7	1/4½	1/-	
Airdrie	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2½	
Alexandria	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2	
Arbroath	1/7	1/6	1/6	1/7	1/6	1/6	1/5	1/1	
Ayr	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2½	
Bathgate	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/1 to 1/2	
Blairgowrie	1/7	—	1/7	1/7	1/7	1/7	1/6½	—	
Bo'ness	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2	
Coatbridge	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2½	
Dumbarton	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2	
Dumfries	1/5	1/5	1/5	1/6	1/5	1/6	1/5	1/1 to 1/2	
Dundee	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2½	
Dunfermline	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2½	
Edinburgh	1/7	1/7	1/7	1/8	1/8	1/7	1/6½	1/2½	
Falkirk	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2½	
Fort William	1/7	1/6	1/6	1/7	1/6	1/6	1/6½	1/1½	
Galashiels	1/5	1/5	1/5	1/6	1/5	1/5	1/5½	1/1	
Glasgow	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2½	
Greenock	1/7	1/7	1/7	1/8	1/7	1/7	1/5½	1/1 to 1/2½	
Hamilton	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2½	
Hawick	1/5	1/5	1/5	1/6	1/5	1/5	1/5½	1/1½	
Helensburgh	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2½	
Inverness	1/3½	—	1/3	1/4	1/4½	1/4	1/3½	10d. to 1/2	
Kilmarnock	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2½	
Kirkcaldy	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2½	
Kirkwall	1/7	1/5	1/3	1/4	1/4	1/4	1/4	1/-	
Lanark	1/7	1/7	1/7	1/8	1/7	1/7	1/5½	1/2½	
Leith	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2½	
Motherwell	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2½	
Perth	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2½	
Stirling	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2½	
Stirlingshire (Eastern District)	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2½	
Wishaw	1/7	1/7	1/7	1/8	1/7	1/7	1/6½	1/2½	

* The information given in this table is copyright. The rates of wages in the various towns in England and Wales are given on page 824.

CONTRACTS, COMPETITIONS, &c.

For some contracts still open, but not included in this List, see previous issues. Those with an asterisk are advertised in this number. Certain conditions beyond those given in the following information are imposed in some cases, such as that advertisers do not bind themselves to accept the lowest or any tender; that a fair wages clause shall be observed; that no allowance will be made for tenders; and that deposits are returned on receipt of a bona-fide tender unless stated to the contrary.

The date given at the commencement of each paragraph is the latest date when the tender, or the names of those willing to submit tenders, may be sent in; the name and address at the end is the person from whom or place where quantities, forms of tender, &c., may be obtained.

BUILDING AND PAINTING.

NOVEMBER 24.—**Dorchester.**—REPAIRS, &c.—(1) Repairs to roofs at 21, North-square; (2) painting and repairs to dressing-rooms at Corn Exchange, for the T.C. Mr. H. D. Strange, Borough Surveyor, 21, North-square, Dorchester.

NOVEMBER 24.—**Huddersfield.**—HOUSES.—Erection of 24 houses (in six blocks of four houses each), in Hanging-Stone-road, Berry Brow, for the T.C. Borough Architect, 26, Ramsden-street, Huddersfield.

NOVEMBER 24.—**Lyminge.**—REPAIRS.—For repair and painting to pair of cottages and farm buildings at Valley Farm, Lyminge, for the Kent C.C. Mr. P. W. Cox, Chief Agricultural Officer, Sessions House, Maidstone.

NOVEMBER 24.—**Middlesex.**—HOUSES.—Erection of 32 houses near the Ride, Boston-road, Brentford, for the Middlesex County Council. County Engineer, Middlesex Guildhall, Westminster, S.W.1. Deposit £2 2s.

NOVEMBER 26.—**Brampton.**—ALTERATIONS.—For alterations and construction at Brampton School. County Surveyor, Walden House, Huntingdon.

NOVEMBER 26.—**Cowbridge.**—ALTERATIONS, &c.—For alterations and additions at the Police Station, Cowbridge, for the C.C. Mr. T. Mansel Franklen, Clerk, Glamorgan County Hall, Cardiff.

NOVEMBER 26.—**Farnham.**—COTTAGES.—Erection of two pairs of cottages, near the Elm Tree, Weybourne, for the U.D.C. Mr. J. W. Wright, Clerk, Council Offices, Farnham. Deposit 10s.

NOVEMBER 26.—**Fermoy.**—HOUSES.—Erection of eight five-room dwellings, the construction of water mains, main sewer extension, &c., for the U.D.C. Mr. Wm. Sheehan, Clerk, Fermoy.

NOVEMBER 26.—**Halifax.**—CONVERSION.—For conversion of stables to garage, &c., for the T.C. Borough Engineer, Crossley-street, Halifax. Deposit £1 1s.

NOVEMBER 26.—**Hove.**—PAINTING.—For colouring and painting portions of the interior of the Town Hall. Borough Surveyor, Town Hall, Hove.

NOVEMBER 26.—**Waterford.**—SHED.—Erection of Customs transit shed on quay, for the Harbour Commissioners. Engineer, Harbour, Waterford. Deposit £2 2s.

NOVEMBER 26.—**Woking.**—ALTERATIONS.—For alterations and additions to the Pavilion at the Recreation Ground, for the U.D.C. Mr G. J. Wooldridge, Surveyor, Council Offices, Woking.

NOVEMBER 27.—**Bristol.**—FIRE STATION, &C.—Erection of a fire station and sergeant's house in Green-lane, Avonmouth, for the T.C. City Valuer's Department, The Exchange, Bristol. Deposit £1 1s.

✱NOVEMBER 27.—**Clacton-on-Sea, Essex.**—NEW RESIDENCE.—Erection of new residence at Clacton-on-Sea. Mr. G. H. B. Gould, A.R.I.B.A., Station-road, Clacton-on-Sea. Deposit £1 1s.

NOVEMBER 27.—**Derby.**—HOUSES.—Erection of 19 pairs houses, Type B 6, for the T.C. Mr. C. A. Clews, Borough Surveyor, Babington-lane, Derby. Deposit £1 1s.

NOVEMBER 27.—**Edmonton.**—REPAIRS.—Repairs and alterations to new Branch Library, at 12, Queen Anne's-place, Bush Hill Park, for the U.D.C. Mr. Cuthbert Brown, Engineer, Town Hall, Edmonton, N.9.

NOVEMBER 27.—**Enfield.**—HOUSES.—Erection of 16 houses, for the U.D.C. Surveyor, Public Offices, Enfield. Deposit £2 2s.

NOVEMBER 27.—**Glasgow.**—HOUSES.—Erection of 200 houses at Merryflats, Govan, for the T.C. Mr. J. Lindsay, Town Clerk, City Chambers, Glasgow.

NOVEMBER 27.—**Ilford.**—MATERNITY HOME AND MEDICAL OFFICER'S RESIDENCE.—Erection and completion of the following buildings at Hatch-lane, Ilford, for the Ilford U.D.C.: (1) Maternity home; (2) medical officer's residence. Mr. H. Shaw, M.Inst. C.E., Engineer and Surveyor to the Council, Town Hall, Ilford. Deposit £5 5s.

NOVEMBER 27.—**Lurgan.**—HOUSES.—Erection of 22 cottages in the rural district of Lurgan, for the Government of Northern Ireland. Mr. W. D. Scott, Assistant Secretary, Ministry of Finance, 15, Donegall-square West, Belfast. Deposit £1.

NOVEMBER 27.—**Ripon.**—OFFICES, &C.—For block of offices and showrooms at Ripon, for Messrs. T. & R. Williamson, Ltd. Mr. H. E. Illingworth, A.R.I.B.A., 8, East Parade, Leeds.

NOVEMBER 27.—**Truro.**—ADDITIONS.—For additions and alterations to 14, High Cross, Truro. Mr. Alfred J. Cornelius, architect, Truro.

NOVEMBER 28.—**Glamorganshire.**—VARIOUS WORKS.—(1) Secondary School Site, Taibach: fencing; (2) Port Talbot Secondary School: new science block; (3) Tonna Council School: conversion of offices and drainage; (4) Llangyfelach Council School: repairs; (5) Pencoed Council School: new gates and other works; (6) Rhiwfawr (Swansea Valley) Council School: new playsheds and improvements to playgrounds; (7) Heolycyw Council School: conversion of offices; (8) painting (to be executed during the Christmas Holidays) of the exterior and painting and colouring of the interior of Rhos (Pontardawe) and Bryndu (Kenfig Hill) Mixed and Infants' Council Schools; painting the exterior and colouring the interior of Reynoldston (Gower) Council School and house (house externally only); and painting the exterior of Penclyn (Morriston) Council School; (9) Hendreforgan Council School: additional classroom and remodelling offices. Mr. T. Mansel Frankien, Secretary, Glamorgan County Hall, Cardiff.

NOVEMBER 28.—**Glasgow.**—SUB-STATION.—Erection of sub-station at Abercorn-street, Paisley, for the T.C. Mr. James Dalrymple, General Manager, 46, Bath-street, Glasgow.

NOVEMBER 28.—**Harrogate.**—PAINTING.—For painting, &c., at Royal Bath Hospital and Rawson Convalescent Home. Mr. E. P. L. Dixon, secretary, Harrogate.

NOVEMBER 28.—**Leeds.**—ADDITIONS.—Erection of house to accommodate oven to kitchen block at the Township Infirmary, for the B.G. Messrs. G. Fredk. Bowman & Son, architects, 5, Greek-street, Leeds.

NOVEMBER 28.—**Manchester.**—ALTERATIONS.—For alterations at the Moss Side Library. City Architect, Town Hall, Manchester. Deposit £1 1s.

NOVEMBER 28.—**Smethwick.**—DEMOLITION.—For the demolishing of buildings and clearance of site for proposed gasholder tank at the Gas Works, for the T.C. Mr. E. Hardiker, Manager, Gas Works, Rabone-lane, Smethwick.

NOVEMBER 28.—**Stafford.**—PAINTING.—For the painting and colouring, &c., of the interior of the Union Offices, for the [illegible]. Mr. C. B. Wilton, Clerk, Union Offices, Market-[illegible] Stafford.

NOVEMBER 29.—**Huddersfield.**—HOUSES.—Erection of 36 houses (in [illegible] blocks of 4 houses each), in Penistone-road, Waterloo, for the T.C. Borough Architect, 26, Ramsden-street, Huddersfield.

NOVEMBER 29.—**Salford.**—HOUSE.—Erection of a small house at Salford Sewage Works, Weaste, for the T.C. Mr. George Westcott, architect, 13, Bridge-street, Manchester.

NOVEMBER 30.—**Batley.**—HOUSES.—Erection of 32 houses, for the T.C. Mr. H. L. Hall, Borough Engineer.

NOVEMBER 30.—**Brynmawr.**—HOUSES.—Erection of 12 parlour type houses and alternately for 12 non-parlour type houses at Twyncynghordy, for the U.D.C. Mr. Hy. Waters, M.S.A., Waungoch House, Beaufort. Deposit £2 2s.

NOVEMBER 30.—**London, S.W.**—TELEPHONE EXCHANGE.—Erection of Sloane new telephone exchange, Scolding-street, S.W., for the Commissioners of His Majesty's Office of Works. Contracts Branch, H.M.O.W., King Charles-street, London, S.W.1. Deposit one guinea (payable to the Secretary).

NOVEMBER 30.—**Singapore.**—**POST OFFICE.—Erection of new general post office, Singapore. Crown Agents for the Colonies, 4, Millbank, S.W.1. Deposit £10.**

DECEMBER 1.—**Adisham.**—RE-SHINGLING.—For the re-shingling of Adisham Church tower. Mr. T. F. W. Grant, 11, Buckingham-street, Adelphi, W.C.2.

DECEMBER 1.—**Bingley.**—CLASSROOMS.—Erection of two classrooms at Eldwick Sanatorium, near Bingley, for the West Riding Public Health Committee. West Riding Architect, County Hall, Wakefield.

DECEMBER 1.—**East Ham.**—PAINTING.—For the internal re-decoration of Napier-road School, for the B.C. Borough Engineer, Town Hall, East Ham, E.6. Deposit 10s.

DECEMBER 1.—**Huddersfield.**—BUNGALOW.—Erection of a bungalow at Birchencliffe, Huddersfield, for Miss M. Mossop. Messrs. Stocks, Sykes & Hickson, architects, 4, St. Peter's-street, Huddersfield.

DECEMBER 3.—**Barnet, N.**—HOUSES.—Erection of 23 houses and contingent work on land adjoining May's-lane and May's-lane-road, for the Barnet U.D.C. Mr. W. B. Chancellor, Engineer and Surveyor, Council Offices, Barnet.

DECEMBER 3.—**Blackburn.**—EXTENSION.—For general builders' work in connection with the War Memorial extension at the Blackburn and East Lancashire Royal Infirmary. Messrs. Sames & Green, architects, 14, Richmond-terrace, Blackburn. Deposit £2 2s.

DECEMBER 3.—**Leominster.**—HOUSES.—Construction of 10 parlour-type and 10 non-parlour-type houses, for the T.C. Mr. James Budd, Borough Surveyor, Town Hall, Leominster.

DECEMBER 3.—**Swindon.**—LAVATORY.—Construction of lavatory at Mechanics' Institute, for the G.W.R. Co. Mr. R. R. Ford, Secretary, Swindon.

✱DECEMBER 3.—**Wandsworth, S.W.18.**—DEMOLITION.—Demolition of premises, No. 380, Streatham High-road, S.W.16, for the Metropolitan Borough of Wandsworth. Borough Engineer Mr. E. J. Elford, M.Inst.C.E., 215, Balham High-road, S.W.17.

✱DECEMBER 3.—**Wandsworth, S.W.18.**—FOUNDATIONS.—Excavations and construction of concrete foundations with steel reinforcement for proposed public swimming bath and buildings on the site of No. 380, Streatham High-road, S.W.16, for the Metropolitan Borough of Wandsworth. Borough Engineer, Mr. E. J. Elford, M.Inst.C.E., 215, Balham High-road, S.W.17.

DECEMBER 4.—**Bodmin.**—NEW POST OFFICE.—Erection of a new post office at Bodmin, for the Commissioners of H.M. Office of Works. Contracts Branch, H.M.O.W., King Charles-street, London, S.W.1. Deposit £1 1s (payable to the Secretary).

✱DECEMBER 4.—**Hampton, Middlesex.**—ADDITIONS (BUILDING).—Additions to the Isolation Hospital at Uxbridge-road, Hampton-hill (new observation block and alterations and additions to Administration Block, &c.), for the Hampton Urban District Council. Mr. Sidney H. Chambers, Surveyor to the Council, Public Offices, Hampton, Middlesex. Deposit £2 2s.

DECEMBER 4.—**Monmouthshire.**—VARIOUS WORKS.—For carrying out the following, for the Monmouthshire Agricultural Committee:—(*a*) "Rock Cottage," Penhow, repairs and painting; (*b*) Penyworlod Farm, Penhow, repairs and painting; (*c*) road-making at Hill Farm, Llanvaches, and at Penyworlod Cottages, Penhow. Mr. A. Every Clayton, County Land Agent, 2, Gold Tops, Newport, Mon.

DECEMBER 5.—**Belfast.**—MUSEUM.—For superstructure works for first section of the Museum and Art Gallery in Botanic Gardens Park, for the T.C. Mr. R. B. Roe, Quantity Surveyor, 17, Wellington-place, Belfast. Deposit £2 2s.

DECEMBER 5.—**Brighton.**—HOUSES.—Erection of 87 houses on a portion of the Queen's Park Housing Site, for the County Borough of Brighton. Either member of the Panel of Architects: Messrs. Clayton & Black, 10, Prince Albert-street; Messrs. T. Garrett & Son, 34, Ship-street; Mr. E. Wallis Long, 56, East-street; Mr. W. H. Overton, 22, Ship-street. Deposit £1.

✱DECEMBER 5.—**Herts.**—SLATING.—Reslating the roof of water tower at Leavesden Mental Hospital, King's Langley, Herts, for the Metropolitan Asylums Board. Office of the Board, Victoria Embankment, E.C. 4. Deposit £1.

✱DECEMBER 5.—**Kent.**—TILING.—Repairing the tile roofs at White Oak, Swanley, Kent, for the Metropolitan Asylums Board. Office of the Board, Victoria Embankment, E.C. 4. Deposit £1.

DECEMBER 5.—**Swanley.**—ROOF REPAIRS.—For repairing the tile roofs at White Oak, Swanley, Kent, for the Metropolitan Asylums Board. Office of the Board, Victoria-embankment, E.C.4. Deposit £1.

✱DECEMBER 5.—**Various Places.**—WEIGHBRIDGE FOUNDATIONS.—Work to be done in forming weighbridge foundations at (1) Darenth Training Colony, Dartford, Kent; (2) Northern Fever Hospital, Winchmore-hill, N.21; (3) Queen Mary's Hospital for Children, Carshalton, Surrey, for the Metropolitan Asylums Board. Office of the Board, Victoria Embankment, E.C. 4. Deposit £1 in respect of each work.

✱DECEMBER 5.—**Woolwich, S.E.18.**—CONSTRUCTION.—Erection of a new kitchen annexe and baker's oven, at the Brook Hospital, Shooter's Hill-road, Woolwich, S.E.18, for the Metropolitan Asylums Board. Office of the Board, Victoria Embankment E.C. 4, after 10 a.m. Deposit £1.

DECEMBER 6.—**Colwyn Bay.**—HOUSES.—Erection of 34 houses at Church-road, Rhos, for the U.D.C. Mr. W. J. Dunning, Surveyor, Council Offices, Colwyn Bay.

✱DECEMBER 7.—**Shoeburyness.**—CONSTRUCTION.—(1) The construction of two timber-built refreshment rooms upon the Common at Shoeburyness; (2) the enlargement of the existing public conveniences upon the Common; (3) the construction of a public convenience and refreshment room on Whitaker's-parade, at Shoeburyness, for the U.D.C. Mr. E. Read, Surveyor, Council Offices, Shoeburyness.

✱DECEMBER 10.—**Bolton-upon-Dearne.**—DWELLING HOUSES.—Erection of 20 dwelling houses (4 parlour type, 16 non-parlour type) in Barmborough-lane, Goldthorpe, for the Bolton-upon-Dearne U.D.C. Mr. William Hy. Adams, M.S.A., Council Offices, Bolton-upon-Dearne. Deposit 10s. 6d.

DECEMBER 10.—**Howdon.**—TIMBER JETTY.—Construction of timber jetty in Howdon Yard Bay, for the Tyne Improvement Commissioners. Mr. Albert Blacklock. Secretary, Tyne Improvement Commission Offices, Bewick-street, Newcastle-on-Tyne. Deposit £2 2s.

DECEMBER 10.—**Newcastle-on-Tyne.**—FLATS.—Erection of 208 dwellings in flats in two stories at Delaval-road, Benwell, for the T.C. Housing Architect, 18, Cloth Market, Newcastle. Deposit £2 2s.

DECEMBER 10.—**Scotland.**—MAINTENANCE WORKS.—For the execution of Maintenance Works during the period of three years as follows:—Edinburgh, Glasgow, Stirling, Aberdeen, Dundee, Paisley, Greenock, Perth, Inverness, for H.M. Commissioners of Works. Contracts Branch, H.M. Office of Works, Storey's Gate, S.W.1. Deposits: 10s. for carpenters' and joiners' and ironmongers' work, and plumbers' work; 2s. 6d. for glaziers' work, and 5s. for other trades.

DECEMBER 11.—**Edmonton.**—ADDITIONS.—Erection of additional buildings at the laundry, Edmonton House, Bridport-road, Edmonton, for the Board of Guardians. Mr. J. C. S. Mummery, A.R.I.B.A., 34, Bloomsbury-square, W.C.1.

✱DECEMBER 11.—**Gloucester.**—TELEPHONE REPEATER STATION.—Erection of a telephone repeater station at Gloucester, for the Commissioners of His Majesty's Office of Works. Contracts Branch, H.M.O.W., King Charles Street, London, S.W.1. Deposit £1 1s. (payable to the Secretary).

✱DECEMBER 12.—**Southend-on-Sea.**—HOUSES.—For the erection and completion of 66 houses for the Corporation. Mr. Robt. H. Dyer, Borough Engineer, Municipal Buildings, Southend-on-Sea. Deposit £2.

✱DECEMBER 12.—**Southend-on-Sea.**—CONCERT HALL, &C.—For the execution and completion of a concert hall and shelters on the Second Promenade, Pier Hill, for the Corporation. Mr. Robert H. Dyer, Borough Engineer, Municipal Buildings, Southend-on-Sea. Deposit £2.

✱DECEMBER 13.—**Woolwich, S.E.**—HOUSES.—Erection of sixty houses, for the Metropolitan Borough Council of Woolwich, on their housing estate at Eltham. Council's Architect: Mr. John Sutcliffe, Borough Engineer, Town Hall, Woolwich. Deposit £3 3s.

DECEMBER 14.—**Rowley Regis.**—HOUSES.—For erecting 12 semi-detached houses and incidental works of house drainage, &c., for the U.D.C. Mr. Daniel Wright, Clerk, Rowley Regis.

★DECEMBER 17.—**Poplar, E.14.**—TENEMENTS WITH SHOPS.—Erection of 31 tenements with shops and showrooms on a site at Bow-road, for the Poplar B.C. The Borough Surveyor, Council Offices, High-street, Poplar, E. 14. Deposit £3 3s.

DECEMBER 18.—**Hackney, E.8.**—BUILDING WORKS.—Building works, being extension and completion of the electricity sub-station at Dalston-lane, Hackney, for the Metropolitan Borough of Hackney. Borough Electrical Engineer, 306, Mare-street, Hackney, E.8, on and after November 26. Deposit £1 1s.

DECEMBER 19.—**Featherstone.**—HOUSES.—Erection of 20 houses at Little-lane, Purston, near Pontefract, for the Featherstone U.D.C. Mr. Samuel Chesney, A.R.I.B.A., Council Offices, Featherstone, near Pontefract. Deposit £2 2s.

DECEMBER 19.—**Hawksworth.**—FARMHOUSE, &C.—(*a*) Farmhouse and buildings at Lane Side Farm, Hawksworth; (*b*) alterations and repairs to existing farm buildings at Lane Side Farm, Hawksworth, for the West Riding Small Holdings' Committee. Land Agent, County Hall, Wakefield. Deposit £1.

★DECEMBER 21.—**Kent.**—SCHOOL EXTENSION.—Extension of the School of Art, Beckenham, for the U.D.C. County Education Architect (Mr. W. H. Robinson, F.S.Arc.), Room 69, Sessions House, Maidstone. Deposit £2.

NO DATE.—**Altofts.**—HOUSES.—Whole works required for five pairs of non-parlour houses. Apply Pope & Pearson, Ltd., Colliery Offices, Normanton, Yorkshire.

NO DATE.—**Castleford.**—HOUSE EXTENSIONS.—Whole works required in alterations and additions to house at Saville-road for Mr. G. Johnson. Mr. R. A. Easedale, architect, County Chambers, Castleford.

NO DATE.—**Girvan.**—HOUSES.—Erection of 28 houses (7 blocks), for the T.C. Mr. William Baillie, architect, 2, West Regent-street, Glasgow. Deposit £1.

NO DATE.—**Harrogate.**—HOUSE.—Erection of a detached residence, St. James' Park, Harrogate, for Major F. A. Johnson. Mr. Butler Wilson, F.R.I.B.A., architect, Greek-street Chambers, Leeds.

NO DATE.—**Heckmondwike.**—BUSINESS PREMISES.—For new branch premises in Norristhorpe-lane, Heckmondwike, for the Co-operative Wholesale Society, Ltd. C.W.S., Ltd., Architect's Department, 1, Balloon-street, Manchester. Deposit £1 1s.

NO DATE.—**Hitchin.**—HOUSES.—Erection of a block of six cottages at Codicote, near Welwyn, for the R.D.C. Mr. A. E. Passingham, Clerk, 5, Bancroft, Hitchin.

NO DATE.—**Leeds.**—HOUSES.—Separate trades required for four terrace houses at Headingley. Apply Messrs. H. Boston & Sons, Reservoir-street, Leeds.

NO DATE.—**Ripon.**—OFFICES AND SHOWROOMS.—All trades required in the erection of offices and showrooms for Messrs. T. & R. Williamson, Ltd. Mr. H. E. Illingworth, architect, 8, East Parade, Leeds.

NO DATE.—**Stewarton.**—HOUSES.—Erection of 12 tenement and 14 flatted houses and double cottages, for the T.C. Mr. W. Macrae, Town Clerk, Council Chambers, Stewarton.

FURNITURE, MATERIALS, etc.

NOVEMBER 26.—**Barnet.**—MATERIALS.—Supply of flints, hoggin, ballast, sand, granite chippings, &c., to the U.D.C. Mr. F. P. Kindell, Surveyor, Council Offices, Friern Barnet-road, N.

NOVEMBER 26.—**Molesey.**—MATERIALS.—Supply of flints, granite and macadam to the U.D.C. Surveyor, East Molesey.

NOVEMBER 27.—**Belfast.**—FURNITURE, &C.—Supply of laboratory furniture and fittings at Greenmount Agricultural School, for the Government of Northern Ireland. Ministry of Finance, Belfast.

NOVEMBER 28.—**Dublin.**—STORES.—Supply of stores for three months to the Great Southern and Western Railway (Ireland) Co. Stores Superintendent, Inchicore, Dublin.

NOVEMBER 28.—**Glamorgan.**—FURNITURE.—For supply of bedding and furniture for the use of the Glamorgan Constabulary, to the Glamorgan Standing Joint Committee. Office of the Chief Constable, Canton, Cardiff.

NOVEMBER 29.—**Epsom.**—TAR.—Supply of 30,000 gallons of refined tar for road dressing, for the R.D.C. Mr. Arthur R. Cotton, Clerk, Epsom.

NOVEMBER 30.—**Brighton.**—MATERIALS.—Supply of 140 tons of B.S. No. 7 rails in 60 ft. lengths, and 800 tons of granite paving setts. Tramways Engineer, Lewes-road, Brighton.

DECEMBER 1.—**Dolgelly.**—ROAD PLANT.—Supply to the Merioneth C.C. of steam roller with scarifier, haulage engine with trailer, stone crusher and screen, two tarring machines, and water-cart. Mr. Wm. Owen Jones, County Surveyor, Dolgelly.

DECEMBER 1.—**Hythe.**—PIPES.—Supply of 200 yds. of 8 in., 1,640 yds. of 4 in., and 140 yds. of 3 in. cast-iron pipes and special castings. Mr. W. F. Bickford, Borough Surveyor, Hythe.

DECEMBER 8.—**Crickhowell.**—SUPPLIES.—For supply to Board of Guardians of boots, petroleum, cordwood, &c. Mr. Thomas Vaughan, Town Hall, Crickhowell.

JANUARY 23, 1924.—**Madras.**—PIPES.—Supply of stoneware pipes and specials, ranging from 4 in. to 18 in. diameter, and aggregating a total length of 400,000 lineal ft., for the T.C. Messrs. James Mansergh & Sons, agents, 5, Victoria-street, S.W. Charge 5s.

ENGINEERING, IRON AND STEEL.

NOVEMBER 24.—**Plymouth.**—GAS PLANT.—Supply of new section of carburetted water gas plant, &c., to the T.C. Mr. W. P. Tervet, Manager, Gas Works, Keyham, Devonport. Deposit £2 2s.

NOVEMBER 26.—**Dublin.**—ELECTRICAL INSTALLATION.—For wiring 332 houses on the Fairbrothers Fields estate, for the T.C. City Treasurer, Dublin. Deposit £1 1s.

NOVEMBER 26.—**Girvan.**—WATER WORKS.—Construction of a reservoir on the Penwhapple Burn, including embankment, outlet culvert, valve tower, waste weir, waste water channel, and meter house, for the T.C. Messrs. Warren & Stuart, 94, Hope-street, Glasgow. Deposit £2.

NOVEMBER 26.—**London.**—PUMPS.—For two centrifugal pumps, together with pipes, fittings, &c., for the Isle of Dogs Pumping Station, for the L.C.C. Chief Engineer, Old County Hall, Spring Gardens, S.W.1. Deposit £5.

NOVEMBER 27.—**Carlton.**—BRIDGE.—Construction of a steel girder road bridge of 150 ft. clear span, with abutments and two flood openings, over the River Aire at Carlton, near Snaith, for the West Riding C.C. West Riding Surveyor, County Hall, Wakefield. Deposit £1.

NOVEMBER 27.—**Lambeth.**—ELECTRIC LIGHT AND FITTINGS.—Provision and installation of electric light wiring and fittings at the Lambeth Hospital, Brook-street, Kennington, S.E., for the Guardians of the Poor of the Parish of Lambeth. Clerk to the Guardians, Guardians' Board Room and Offices, Brook-street, Kennington-road, S.E.11, between the hours of 10 and 5 (Saturdays excepted). Deposit £2.

NOVEMBER 27.—**Sheffield.**—ELECTRICAL EQUIPMENT.—For the electrical equipment required in connection with garage, for the T.C. Mr. J. A. Priestley, Cleansing Superintendent, Town Hall, Sheffield.

NOVEMBER 27.—**Washington.**—ELECTRIC LIGHTS.—Provision of material and erection of six electric lights on Lean-lane, Springwell, and one light at The Fold, Great Usworth, for the U.D.C. Mr. R. J. Swaddle, Surveyor, Council Chambers, New Washington.

NOVEMBER 27.—**Willesden.**—ROLLER.—For one tandem type steam roller, for the U.D.C. Mr. F. Wilkinson, Engineer, Town Hall, Dyne-road, Kilburn.

NOVEMBER 28.—**London.**—PIPING.—Supply to the East Indian Railway Co. of wrought-iron piping. Mr. G. E. Lillie, Secretary, 73-76, King William-street, E.C.4. Charge £1 1s.

NOVEMBER 28.—**London.**—VALVES.—Supply to the Commissioners of His Majesty's Works, &c., of valves. Controller of Supplies, H. M. Office of Works, &c., King Charles-street, S.W.1.

NOVEMBER 28.—**Macclesfield.**—PIPES.—Supply of 1,180 tons of cast-iron pipes and specials of 18 in., 15 in., 12 in., 6 in., and 3 in. diameters, for the T.C. Mr. F. R. Oldfield, Town Clerk, 41, Churchside, Macclesfield. Deposit £2.

NOVEMBER 28.—**Manchester.**—HEATING.—Providing and fixing a low-pressure heating apparatus at the Orford-street Municipal School, for the Education Offices, Deansgate, Manchester. Deposit £1 1s.

NOVEMBER 28.—**Rhondda.**—STEELWORK.—Construction of bridge steelwork weighing approximately 30 tons, for the U.D.C. Mr. E. Taylor, Surveyor, Council Offices, Pentre, Rhondda.

NOVEMBER 29.—**London.**—BRIDGES.—Supply of 14 girder bridges, 60 ft. clear deck spans, for the India Store Dept. Branch 10, Belvedere-road, S.E.

NOVEMBER 29.—**Manchester.**—GAS PIPES.—Supply of about 227 tons of half-turned and bored cast-iron pipes (3 in., 4 in., and 8 in. in dia.), to the Gas Dept. The Secretary, Gas Dept., Town Hall, Manchester.

NOVEMBER 29.—**Manchester.**—PIPES.—Supply of 36 in. welded steel pipes and specials to the Gas Department, Stretford. Mr. J. H. Sillitoe, Secretary, Gas Department, Town Hall, Manchester.

NOVEMBER 29.—**Shields.**—BRIDGE.—Construction of the steel superstructure of a bridge to carry the Pontop and South Shields Branch over a new road through the Deans, for the London and North-Eastern Railway Co. Chief Engineer, North-Eastern Area, York.

NOVEMBER 29.—**Southend-on-Sea.**—BRIDGE.—Construction of a 14 ft. span bridge for a 36 ft. road, for the diversion of Prittlewell Brook, for the T.C. Mr. Robert H. Dyer, Borough Engineer, Municipal Buildings, Southend-on-Sea. Deposit £1.

NOVEMBER 30.—**Emsworth.**—GAS HOLDER.—For erection of gas holder and steel tank, for the Emsworth Gas and Coke Co. Mr. J. W. L. Cooper, Secretary, Gas Offices, Emsworth.

NOVEMBER 30.—**Grangemouth.**—WATER PIPES.—Supplying 820 tons of 12 in. diameter cast-iron pipes and specials, or alternatively, for supplying 1,411¼ tons of 12 in. diameter cast-iron pipes and specials, to the T.C. Mr. David A. Donald, Water Engineer, Town Hall, Grangemouth.

NOVEMBER 30.—**Hay.**—RESERVOIR WORKS.—Construction of watertight lining to filter bed at waterworks and erection of unclimbable fencing. Mr. H. Gilby, Surveyor, Hay. Deposit £1 1s.

NOVEMBER 30.—**Hemsworth.**—BRIDGE.—Reconstruction of Oldlake Bridge (8 ft. span), on the Doncaster and Selby main road, within the rural districts of Hemsworth and Pontefract, for the West Riding C.C. West Riding Surveyor, County Hall, Wakefield. Deposit £1.

NOVEMBER 30.—**Ince-in-Makerfield.**—WATERWORKS PLANT.—Supply of Diesel oil engine, driving bore-hole, and horizontal pumping sets in duplicate, to the U.D.C. Mr. A. F. Howgate, Clerk, Council Offices, Ince, near Wigan.

NOVEMBER 30.—**Newcastle-on-Tyne.**—CRANE.—For 20-ton hydraulic crane with accumulator and electrically-driven force pump, for the Tyne Improvement Commissioners. Mr. R. Aughton, General Manager, Bewick-street, Newcastle-upon-Tyne. Deposit £1.

NOVEMBER 30.—**Sydney.**—BRIDGE.—Construction of the superstructure and substructure of a cantilever bridge across Sydney Harbour; also an alternative tender for the construction of the superstructure and substructure of an arch bridge across Sydney Harbour. Agent-General for New South Wales, Australia House, Strand, W.C.

DECEMBER 1.—**Guernsey.**—CONCRETE DECK.—For the removal of the timber deck at No. 2 Landing, White Rock Pier, and the construction of a new deck in reinforced concrete on the Considere system at the Harbour of St. Peter Port, Guernsey. Mr. J. H. Duquemin, States Engineer, Guernsey.

DECEMBER 1.—**London, W.10.**—ELECTRICAL WORK.—Electrical work required to be done at the St. Marylebone Hospital, Rackham-street, Notting Hill, W.10, in connection with the X-ray Department and Lecture Room for Nurses, for the St. Marylebone Board of Guardians. Messrs. Jarvis & Richard, architects, 60, Tufton-street, S.W.1, between the hours of 10 a.m. and 5 p.m. on November 13, 14 & 15. Deposit £1 Treasury Note.

DECEMBER 3.—**Birmingham.**—REFUSE DISPOSAL PLANT.—For the supply and erection of plant for refuse disposal and salvage works, at Redfern-road, Hay Mills, for the T.C. Mr. James Jackson, Superintendent, Salvage Department, 161, Corporation-street, Birmingham. Deposit £1 1s.

DECEMBER 3.—**Bradford.**—ADVERTISING STATION.—Supply and erection of a steel framework advertising station in Bank-street, for the T.C. City Engineer, Town Hall, Bradford.

DECEMBER 3.—**London.**—CONVEYOR.—Supply of 10-ton hand-operated overhead traveller, of 34 ft. 6 in. span, for the Isle of Dogs Pumping Station, for the L.C.C. Chief Engineer, Old Country Hall, Spring-gardens, S.W.1. Deposit £2.

DECEMBER 3.—**Sydney.**—SWITCHGEAR.—**High tension switchgear, for Municipal Council. Department of Overseas Trade** (Room 52), 35, Old Queen-street, S.W.1.

DECEMBER 4.—**Stoke-on-Trent.**—HEATING.—For extension of heating and hot-water service at Institution, for the B.G. Mr. T. Wood, Clerk, Union Offices, Stoke-on-Trent.

DECEMBER 5.—**London.**—ELECTRIC INSTALLATION.—Extensions to the installation of electric lighting and power in the new kitchen at Tooting Bec Mental Hospital, Tooting, for the Metropolitan Asylums Board. Office of the Board, Victoria Embankment, E.C.4. Deposit £1.

DECEMBER 6.—**St. Pancras.**—PUMP.—Supply of vertical electric motor-driven condensing water pump to deal with 750,000 gallons per hour, for the B.C. Electricity Dept., St. Pancras. Deposit £1.

DECEMBER 7.—**East Lothian.**—PIPES.—Supply to the East Lothian Western District Water Board of 3,600 tons of cast-iron pipes. Messrs. G. H. Hill & Sons (Manchester), 40, Kennedy-street, Manchester. Deposit £1 1s.

DECEMBER 7.—**London.**—STEELWORK, &C.—(1) Steelwork for bridges, (2) cast-iron pipes and valves, for South Indian Railway Co. Offices, 91, Petty France, Westminster, S.W.1. Charge 5s. each.

DECEMBER 8.—**Grangemouth.**—WATER MAIN.—For laying about 3¼ miles of 12 in. diameter cast-iron pipes, or alternatively about 6 miles of 12 in. diameter cast-iron pipes, for the T.C. Mr. David A. Donald, C.E., Town Hall, Grangemouth. Deposit £2 2s.

DECEMBER 8.—**Radcliffe.**—CONDUIT.—Supply and erection of a steel and cast-iron sewage conduit over the L.M. & S. Railway, for the U.D.C. Mr. W. L. Rothwell, Engineer, Council Offices, Radcliffe. Deposit £1 1s.

DECEMBER 8.—**Ripley.**—PIPES.—Supply of 6 in. C.I. pipes and specials and laying water main, for the U.D.C. Mr. G. W. Bird, Surveyor, Town Hall, Ripley.

DECEMBER 11.—**Temple Cloud, near Bristol.**—HEATING (HOT-WATER).—Installing, for the Clutton B.G. in their Institution, a system of hot-water heating and hot-water service, together with sundry other improvements. The Engineer, Clutton Union, Temple Cloud, near Bristol.

DECEMBER 20.—**South Africa.**—MATERIALS, &C.—Supply to the municipality of Graaf-Reinet of (*a*) cast-iron water-pipes, valves and fittings; (*b*) crude oil engines, generators and street equipment. Department of Overseas Trade, 35, Old Queen-street, S.W.1.

DECEMBER 31.—**Kempton Park.**—ENGINES, &C.—Supply and erection of two reciprocating engines and pumps at Kempton Park Pumping Station, for the Metropolitan Water Board. Chief Engineer's Department, 173, Rosebery-avenue, Clerkenwell, E.C. Deposit £3 3s.

JANUARY 16, 1924.—**Glasgow.**—REFUSE DISPOSAL WORKS.—Tenders and designs for proposed refuse disposal works, at Govan, Glasgow. Mr. W. Greig Superintendent of Cleansing, 20, Trongate, Glasgow.

JANUARY 17.—**New Zealand.**—PIPES, &C.—Supply of 10 in., 12 in., and 21 in. steel pipes and fittings, for the Orongorongo-Karori Water Main. Department of Overseas Trade, 35, Old Queen-street, S.W.1.

FEBRUARY 14.—**Argentine.**—POWER STATION.—For the construction of a central electric power station of 15,000 h.p., for the Argentine State Oilfields Administration. Department of Overseas Trade, 35, Old Queen-street, S.W.

MAY 1.—**China.**—BRIDGE.—**The Commercial Councillor at Peking has forwarded to the Department of Overseas Trade copies of the official text of a call for tenders by the Hai Ho Conservancy Commission, for the erection of a bridge over the Hai Ho at Tientsin. Tenders must be in the hands of the Commission before noon on May 1, 1924. The cost of erecting the new bridge has been roughly estimated at Tls. 700,000, say £105,000. Department of Overseas Trade, 35, Old Queen-street, S.W.1. Reference 11647/F.E./E.C./2.**

ROAD, SANITARY, AND WATER WORKS.

NOVEMBER 24.—**Morley.**—SANITARY.—For carrying out sanitary improvements at Bridge-street property, for the T.C. Mr. F. Turner, Borough Engineer, Morley.

NOVEMBER 26.—**Camberwell.**—ROADS.—Making-up Dovercourt-road, East Dulwich, for the B.C. Mr. William Bell, Borough Engineer, Town Hall, Peckham-road, Camberwell, S.E.5.

NOVEMBER 26.—**Cardiff.**—SEWER.—Construction of a sewer along Lake-road East, at Roath Park, Cardiff, for Messrs. Mountjoy, Ltd. Mr. E. M. W. Corbett, 3, Castle-street, Cardiff.

NOVEMBER 26.—**Driffield.**—WELL.—For the sinking of three boreholes, 150 ft. deep, and providing and fixing three borehole hand pumps, at Garton-on-the-Wolds, for the R.D.C. Mr. George Harker, 17, Exchange-street, Driffield.

NOVEMBER 26.—**Enfield.**—SEWAGE DISPOSAL WORKS.—Construction of sewage disposal works at Cuckoo Hall-lane, for the U.D.C. Mr. H. R. Crabb, Surveyor, Public Offices, Enfield. Deposit £5 5s.

NOVEMBER 26.—**Golcar.**—SEWERS.—For laying portion of internal sewers in Savile-street, Milnsbridge for the U.D.C. Messrs. Lunn & Kaye, Surveyors, Milnsbridge, Huddersfield.

NOVEMBER 26.—**Hayes.**—ROADS.—For making-up Station-road (approximate length 1,400 yards), for the U.D.C. Mr. D. C. Fidler, Surveyor, Council Offices, Hayes, Middlesex. Deposit £2.

NOVEMBER 26.—**Lanark.**—ROADS.—For the widening of Burnhead, Woodside, and Netherburn highway at Ashgillhead, for the Lanark C.C. Mr. William A. Chapman, Road Surveyor, District Offices, Hamilton.

NOVEMBER 26.—**Mitcham.**—ROADS.—For forming about 750 super yds. footways at Tamworth Recreation Ground, for the U.D.C. Messrs. Chart, Son & Reading, Surveyors, Croydon. Deposit 10s.

NOVEMBER 27.—**Bold.**—ROADS.—Widening and diversion of a portion of the Widnes and St. Helens main road, Bold, for the Lancashire C.C. Mr. W. H. Schofield, County Offices, Preston.

NOVEMBER 27.—**Dover.**—ROADS.—Widening of the Folkestone-road to a width of 60 ft. for a distance of approximately 600 yds., for the T.C. Mr. Wm. B. Smith, Borough Engineer, Maison Dieu House, Dover. Deposit £2 2s.

NOVEMBER 27.—**Hoole.**—ROADS.—Construction of a new road and the widening of the existing Preston and Liverpool main road between Longton Bridge and the Rose and Crown Inn, Hoole, for the Lancashire C.C. Mr. W. H. Schofield County Surveyor, County Offices, Preston.

NOVEMBER 27.—**Leyton.**—ROADS.—Reconstruction of portions of Lea Bridge-road with reinforced concrete and granite sett paving, for the U.D.C. Mr. E. H. Essex, Surveyor, Town Hall, Leyton. Deposit £10.

NOVEMBER 27.—**Liverpool.**—ASPHALTING.—For asphalting playgrounds at the undermentioned recreation grounds: Kirkdale, Devonshire-place, Commercial-road, Cambridge Playground, Athol-street, Llanrwst-street, Rachel-street, for the T.C. Land Steward and Surveyor, Municipal Buildings, Liverpool.

NOVEMBER 27.—**Liverpool.**—CONVENIENCES.—Erection of conveniences at Woolton Wood Estate, for the T.C. Land Steward and Surveyor, Municipal Buildings, Liverpool.

NOVEMBER 27.—**Newton Abbot**—WATER MAIN.—Providing and laying 1,100 yds. of 3 in. cast-iron water main, in the parish of Kingskerswell, for the R.D.C. Mr. R. A. Rogers, surveyor, Union-street, Newton Abbot.

NOVEMBER 27.—**West Hartlepool.**—FOOTPATH.—Construction of footpath in Hart-lane, for the T.C. Mr. Francis Durkin, Borough Engineer, Municipal Buildings, West Hartlepool.

NOVEMBER 28.—**Belfast.**—SANITARY EXTENSION.—For extension of the sanitary accommodation at the Government Instructional Factory, Ormeau-avenue, Belfast. Mr. W. D. Scott, Assistant Secretary, Ministry of Finance, 15, Donegall-square West, Belfast.

NOVEMBER 28.—**Birmingham.**—SEWERS.—Construction of about 2,135 yds. of brick and concrete sewers, and 150 yds. of stoneware and cast-iron pipe sewers, for the T.C. Mr. H. H. Humphries, City Engineer, The Council House, Birmingham. Deposit £2.

NOVEMBER 28.—**Edinburgh.**—PLAYGROUND.—Formation of a tar macadam playground at the Vennel, for the T.C. Mr. James A. Williamson, A.R.I.B.A., Public Works Office, City Chambers, Edinburgh.

NOVEMBER 28.—**Manchester.**—ROADS.—For sewering, draining, kerbing, ballasting, &c., roads on the Burnage Housing Estate, for the T.C. City Engineers (District Surveyor's Department), Town Hall, Manchester. Deposit £1 1s.

NOVEMBER 28.—**Tanfield.**—CONVENIENCE.—Erection of a public convenience at Burnopfield, for the U.D.C. Mr. J. R. Heslop, Surveyor, Council Offices, Tanfield.

NOVEMBER 28.—**Wallsend.**—SANITARY.—For conversion of cellar privies into water closets, for the T.C. Borough Surveyor, Town Hall, Wallsend.

NOVEMBER 29.—**Lambeth.**—ROADS.—(a) Supply of 830 tons of tarred macadam and (b) supplying and laying compressed rock asphalt in Tyers-street and Windmill-row, for the B.C. Mr. Osmond Cattlin, Borough Engineer, Town Hall, Brixton Hill, S.W.2.

NOVEMBER 29.—**Skegness.**—ROADS.—For laying 9,000 square yards of tar macadam roadway on prepared foundations. Mr. R. H. Jenkins, Surveyor, Council Offices, Skegness. Deposit £1 1s.

NOVEMBER 30.—**Adwick-le-Street.**—SEWAGE DISPOSAL WORKS.—For construction or sewage disposal works at Skellow, for the R.D.C. Mr. George Gledhill, Surveyor, Council Offices, Adwick-le-Street, near Doncaster. Deposit £2.

NOVEMBER 30.—**Hay (Breconshire).**—RESERVOIR RECONSTRUCTION.—For (*a*) Carrying out, for the U.D.C., the reconstruction of the watertight lining of the filter bed at the waterworks at Hay Common; (*b*) also for erecting unclimbable iron fencing round reservoir and filter bed. Tenders for whole of work or for (*a*) or (*b*). Mr. H. Gilby, surveyor, Hay. Deposit £1 1s.

NOVEMBER 30.—**Lauder.**—CEMETERY EXTENSION.—For building stone and brick walls, draining and levelling, in connection with an extension of the cemetery. Mr. Geo. L. Broomfield, Lauder.

NOVEMBER 30.—**Park Royal.**—GOLF COURSE.—For the reinstatement of the Park Royal Golf Course, Willesden, N.W. Messrs. Hetherington & Secrett, surveyors, Broadway Station, Ealing, W.5. Deposit £2 2s.

NOVEMBER 30.—**Witham.**—SEWAGE DISPOSAL WORKS.—Construction of sewage disposal works, for the U.D.C. Messrs. Sands & Walker, Milton Chambers, Nottingham. Deposit £3 3s.

DECEMBER 1.—**Belfast.**—TRAMWAY TRACK.—Construction of about 3,200 lin. yds. of single track, for the T.C. Mr. S. Carlisle, General Manager, Corporation Tramways, Sandy-row, Belfast. Deposit £5 5s.

DECEMBER 3.—**Aberavon.**—CONCRETE CULVERT.—For carrying out for the Joint Committee of the Glamorgan County Agricultural Committee and the landowners on Aberavon Moors the construction, excavation, laying and jointing of a 2 ft. 6 in. concrete culvert with manholes and valve chambers. Borough Engineer, Municipal Buildings, Aberavon.

DECEMBER 3.—**Barnsley.**—ROADS.—For making up of Salisbury-street, Kensington-road, Canning-street (Worsbro' Common), Dillington-square, and Dumfries-row, for the T.C. Borough Engineer, Fairfield House Offices, Barnsley.

DECEMBER 3.—**London.**—TAR PAVING WORKS, &c.—For carrying out tar paving works, &c., to the Council's elementary and other schools and other premises or sites provided or maintained by the Council for a period of twelve calendar months commencing on January 1, 1924, and thereafter until determined by three calendar months' notice given by either party, for the L.C.C. Architect to the Council, The County Hall (Room 3), Westminster Bridge, S.E. 1.

DECEMBER 3.—**Steyning.**—SEWERS.—Construction of about 1,750 yards of stoneware pipes for stormwater sewers, for the R.D.C. Mr. Geo. W. Warr, Engineer, Town Hall, Southwick. Deposit £2 2s.

★DECEMBER 5.—**London, S.W.17.**—ASPHALTE PAVING.—Asphalte paving to certain covered ways at Tooting Bec Mental Hospital extension, Churchlane, Tooting, S.W. 17, for the Metropolitan Asylums Board. Office of the Board, Victoria Embankment, E.C. 4, on and after 10 a.m., Wednesday, November 21, 1923. Deposit £1.

DECEMBER 8.—**Kidderminster.**—PAVING.—Laying reinforced concrete foundation and paving with granite setts in Station Hill, for the T.C. Mr. J. Hawcroft, Borough Engineer, Town Hall, Kidderminster. Deposit £2 2s.

DECEMBER 8.—**Ripley.**—SEWAGE WORKS.—Reconstruction of Waingroves sewage outfall works, for the U.D.C. Mr. G. W. Bird, Surveyor, Town Hall, Ripley.

DECEMBER 11.—**Edmonton.**—ROADS.—Alteration and re-forming of entrance road at Silver-street entrance of North Middlesex Hospital, for the Board of Guardians. Mr. J. C. S. Mummery, A.R.I.B.A., 34, Bloomsbury-square, W.C.1.

DECEMBER 11.—**Gosforth.**—SEWERS.—Laying new sewers and formation of roadway on housing site, for the U.D.C. Mr. Geo. Nelson, Surveyor, Council Chambers, High-street, Gosforth.

DECEMBER 11.—**London.**—SEWER.—Construction of a 4 ft. internal diameter sewer in brick of a total length of about 7,290 feet, in Wandsworth and Lambeth, for the L.C.C. Chief Engineer, Old County Hall, Spring-gardens, S.W.1. Deposit £5.

DECEMBER 11.—**London.**—SEWER.—Construction of a brick sewer of varying sizes from 5 ft. to 9 ft. internal diameter, of a total length of about three miles, in Lewisham, for the L.C.C. Chief Engineer, Old County Hall, Spring-gardens, S.W.1. Deposit £10.

NO DATE.—**Bristol.**—ROADS.—For forming builders' roads and constructing sewers, &c., to Building Estate off Westbury-road (near Downs), Bristol. Mr. Fredk. L. Sargent, M.S.A., 44, Corn-street, Bristol.

NO DATE.—**Prudhoe.**—PIT.—For the sinking of a pit, depth about 300 ft. Mr. Sidney Bates, Mining Offices, Prudhoe.

NO DATE.—**Wakefield.**—SANITARY CONVERSIONS.—Sanitary conversions at Carlton, near Wakefield-Plumbing and draining work. Apply to Mr. E. L. Schofield, 72, Dewsbury road, Wakefield.

Competitions.

(*See Competition News, page* 798).

Auction Sales, Tenders, etc.

NOVEMBER 27.—**Richmond.**—Messrs. J. T. Skelding & Co. will sell, *re* W. D. Morris & Co., Ltd., in voluntary liquidation (by order of the Liquidator, Mr. E. K. Hawkins, F.S.A.A., Bowden Works, Grove-road, Richmond) the whole of the stock and plant of the above firm of builders and decorators. Auctioneers, 48, Gresham-street, Guildhall, E.C.2.

NOVEMBER 28.—**Berkshire.**—Messrs. Knight, Frank & Rutley will sell, at Windsor (about 2 miles from the Royal Borough and 20 miles from London), the freehold residential property known as the St. Leonard's Hill Estate. The noble mansion, with garages and stabling, a dower house known as St. Leonard's Dale, four agricultural dairy holdings, the whole extending to about 630 acres. Auctioneers, 20, Hanover-square, W.1.

NOVEMBER 28.—**Rotherhithe, S.E.16.**—Messrs. J. T. Skelding & Co. will sell (by kind permission of Messrs. Scantlin, Taylor & Co.), at Appleby's Yard, Silwood street, Rotherhithe, S.E.16, well-seasoned, dry stock of timber of a large variety of various woods. Auctioneers, 48, Gresham-street, Guildhall, E.C.2.

★NOVEMBER 29.—**London, E.**—Mr. Arthur H. Davis will hold by direction of the Geo. Cohen & Armstrong Disposal Corporation at the Hackney Marshes Depot, the final Clearance Sale of Plant and Machinery, Machine Tools, Railway Material, Furniture and Miscellaneous Stores. Auctioneers, 19, Hanover-square, W. 1.

DECEMBER 4 AND 5.—**London, E.9.**—Mr. F. H. Clark will sell, at the National Projectile Factory, Hackney Marshes, E.9, all the materials contained therein, including a quantity of building materials, portable buildings, glass, &c. Auctioneer, Railway Wharf, York-road, Wandsworth, S.W.18.

★DECEMBER 11.—**Guildford and Merrow.**—Messrs. Joseph Hibbard & Sons will sell, without reserve (by order of Messrs. Sutton & Co. (Guildford), Ltd., who are relinquishing business), at the two depots at Woodbridge-road, Guildford, and at sawmill, Merrow, nearly new and modern sawmill plant and machinery, rolling stock, timber and buildings. Auctioneers; 15, Newington-green, Islington, London, N.16.

★DECEMBER 11.—**Guildford.**—Messrs. Joseph Hibbard & Sons will sell (by order of Messrs. Sutton & Co. (Guildford), Ltd., who are relinquishing business), in three lots (unless previously sold by private treaty), at the offices in Woodbridge-road, Guildford, very valuable main road modern freehold timber yard, store, and suite of offices, situated at 86A, Woodbridge-road, Guildford; also valuable freehold mill site, at Merrow. Auctioneers, as above.

DECEMBER 13.—**London, E.C.**—Mr. Joseph Stower will sell, with vacant possession, freehold property containing the important area of about 75,000 ft., or nearly 1¾ acres, prominently and conveniently situate on the north side of and fronting the main Bow-road. Auctioneers, 43, Chancery-lane, London, W.C.2.

Public Appointments.

NOVEMBER 26.—**Eastbourne.**—General foreman in the Borough Engineer and Surveyor's Department required by the County Borough Council of Eastbourne. Mr. Leslie Roseveare, M.Inst.C.E., Borough Engineer, Town Hall, Eastbourne.

NOVEMBER 26.—**Islington, N.**—Competent Quantity Surveyors for taking off, preparation and issue of bills of quantities for an extension of the municipal offices, and for two housing schemes by the Metropolitan Borough of Islington. Council's Architect, Mr. E. C. P. Monson, F.R.I.B.A., F.S.E., &c., of Finsbury-pavement House, 120, Moorgate, London, E.C.2.

NOVEMBER 28.—**Manchester.**—LECTURER.—Lecturer in Architecture and master in Design required at the University of Manchester. The Internal Registrar, University of Manchester.

DECEMBER 5.—**Greenwich, S.E.10.**—The Council of the Metropolitan Borough of Greenwich is prepared to receive applications for the following appointments:—(1) Grade B Clerk in the Works Department; (2) Grade A Clerk (between the ages of 17 and 21), in the Town Clerk's Department. Mr. Frederick J. Simpson, Town Clerk, Town Hall, Greenwich-road, S.E.10, endorsed "Grade B Clerk," or "Grade A Clerk," as the case may be.

★NO DATE.—**Mitcham.**—Engineering Assistant required by the Mitcham Urban District Council in the Engineer's and Surveyor's Department. Mr. Burnett Bullock, Engineer and Surveyor, Broadway House, Mitcham.

POROUS HARD COURTS.

THE L.C.C. have constructed a hard court for lawn tennis in Battersea Park, and two sets of tennis were recently played upon it by the following well-known players: Miss Joan Austin, Miss Evelyn Colyer, Mr. A. D. Prebble, Mr. J. D. P. Wheatley. It happened that heavy rain had fallen throughout the previous night and the public courts on the other side of the road were under water, but the new court constructed by Granuloid, Ltd., was dry. However, in order to prove the porous character of the surface, water was freely poured upon it and when this quickly disappeared play commenced. At the conclusion of the game the players expressed themselves as highly pleased with the court; its surface and playing qualities were excellent and the rebound of the ball was very true. The porous character of the surface is effected by the use of silica sand, which is granular, and below this special composition a gravel bed is prepared so that the water is drawn off quickly and the surface of the court is not affected by frost, as has been proved in the case of another court constructed prior to last winter. Courts can be made any colour that is desired and this mixes in with the special material, so that it cannot wear off, and the surface does not need recolouring. The lines are inlaid in white and do not become blurred. The courts cost nothing for maintenance. We understand that the construction costs are approximately eight to ten shillings per square yard. The office of the company is Red Lion House, Red Lion Court, Fleet-street, E.C.4, and the inventor of the process is Mr. H. G. Lloyd, M.Inst.C.E.

Rating and Valuation.

In view of the dissolution of Parliament and the fact that many members of the representatives bodies who have been asked to consider the Government's draft Rating and Valuation Bill at present be otherwise engaged, further time may be required for the submission of observations, and we are informed by the Ministry of Health that a further month may be regarded as available for this purpose if it is not found possible to complete the examination of the proposals by December 15, the date originally suggested.

PROPOSED NEW BUILDINGS & OTHER WORKS.*

IN these lists care is taken to ensure the accuracy of the information given, but it may occasionally happen that, owing to building owners taking the responsibility of commencing work before plans are finally approved by the local authorities, "proposed" works at the time of publication have been actually commenced. Abbreviations:—T.C. for Town Council; U.D.C. for Urban District Council; R.D.C for Rural District Council; E.C. for Education Committee; B.G. for Board of Guardians; L.C.C. for London County Council; B.C. for Borough Council; and P.C. for Parish Council.

ABERDEENSHIRE.—A report and plans prepared by Messrs. Tawse & Allan for the reconstruction of the waterside of Slains Bridge across the River Ythan, estimated to cost £13,500, is to be forwarded to the Ministry of Transport by the C.C. with the request for a grant.

ABERTILLERY.—The G.W.R. are to meet a deputation of the Council in regard to the site of a new railway station at Six Bells.

ARNOLD.—The Notts District Miners' Welfare Committee is contributing £3,500 towards the cost of baths to be erected by the U.D.C.

ASHBY-DE-LA-ZOUCH.—Plans passed by U.D.C.: Col. German, two houses at "Priorfields," Ashby.

BARGOED.—The Ministry of Health representative has held an inquiry into application of Gellygaer (Glam) U.D.C. to borrow £8,000 for erecting and equipment of a fire station at Bargoed.

BARNES.—Plans passed by U.D.C.: Two houses, Derby-road, by Mr. Blundel Shadbolt; detached house, Percival-road, by Messrs. Hennell & James; house, Nassau-road, by Messrs. Beil & Kay; thirty-two houses, Wallorton-gardens, by Mr. R. B. Rowell; new road, to be known as "Wallorton-gardens," by Mr. R. B. Rowell; house, Sheen Common-drive, by Mr. G. A. Gale; 97 houses, Sheen-lane, on East Sheen Lodge Estate, by Mr. George Smith; new roads and sewers, Sheen-lane, on East Sheen Lodge Estate, by Mr. George Smith; new roads and sewers, Palewell Park Estate, by Messrs. Edwin Evans & Sons.

BELFAST.—Plans passed: Club-house in Springfield-avenue, for the Springfield Amateur Athletic Club; five houses and shop and houses in Beechmount-avenue, for the Belfast Building Guild, Ltd., Messrs. F. & J. McArdle, architects; six semi-detached villas on Sandown-road, for Mr. Wm. Evans; alterations and additions to the Ulster Club premises in Castle-place, Mr. Godfrey W. Ferguson, architect.

BLYTH AND CUCKNEY.—The Ministry of Health has held an inquiry into the application of the R.D.C. to borrow £11,195 for a sewerage scheme for Harworth.

BOLTON-ON-DEARNE.—The U.D.C. have prepared a scheme for the erection of 114 houses, all of which are to rank for the Government subsidy, augmented by the Council's subsidy of £25 per house. Local builders are being urged to co-operate with the Council.

BRIDGEND.—Plans passed by U.D.C.: House at Lorleston-road, for Mr. R. D. Heard.——The Penybont R.D.C. (Bridgend) is negotiating to purchase land for the erection of a new power station, and is considering a new sewer system for Llangynwyd.

BROMLEY.—The Housing Committee of the B.C. has under consideration the steps to be taken with regard to the erection of additional houses on the surplus land on the housing site, and has resolved to recommend that a scheme embracing about 60 flats in Mosul-way be prepared, and that Mr. Percy Coad be engaged for preparing the lay-out of the remainder of the site and building plans as settled by the Committee.

CONISBOROUGH.—The U.D.C. has passed plans for a miners' institute at Denaby.——The Ministry of Health has approved of the borrowing of £2,517 and £658 for works of water supply.

COSELEY.—An inquiry has been held by the M. of H. into the District Council's application for sanction to borrow £104,723, for the purposes of sewerage and sewage disposal works. The work is becoming a matter of very great urgency to meet the sewage requirements of the housing scheme.

CRAMLINGTON.—It has been decided to erect a new isolation hospital to serve the needs of the districts Weetslade and Cramlington for infectious diseases, as the present structure is totally inadequate to meet the requirements of the district.

DARTON.—The Darton U.D.C. has decided to augment their water supply, and are to construct two concrete reservoirs, each having a capacity of one million gallons. The Council's engineers are Messrs. W. H. Radford & Son, of Nottingham. An application will be made to the Unemployment Grants Committee for a grant towards the cost.

DERBY.—The T.C. proposes to build 10 pairs of houses at a cost of £15,200, for sale to intending occupiers. Sites aggregating 32,000 sq. yds. are to be purchased for further building.

DORCHESTER.—The T.C. is asking the Ministry of Health's sanction to the erection of 50 houses.

DRIFFIELD.—Application is being made to the Ministry of Transport for a grant in respect to the refacing of a section of road at West Lutton, 2.1 miles in extent, and for the widening of the road to 18 ft., at a cost of £6,511; also a grant towards the cost of carrying out the widening of the Ruston Parva corner.

DUBLIN.—Plans passed: Cafe, La Scala Cinema, Prince's-street, for Mr. G. P. Fleming; drainage at 8–11, Anne-street North, for Messrs. Cullen & Sons; showroom to 3–7, Shaw-street, for Messrs. Thompson & Co.; new shops in Johnson's-court, for Mr. B. Wine.

EASTBOURNE.—The T.C. is considering the purchase of Devonshire Park, which it is understood has been valued at £100,000. It is further proposed to purchase certain parts of Beachy Head, the area amounting to some 4,500 acres, with a view to preserving it for the public.

EPSOM.—Plans passed by R.D.C.: House, Woodside-road, Little Heath, for Mr. Stroud; additions to Whinfield, Fairmile, for Major-General Sir H. R. Whitehead; house, Steer-lane, for Mr. Townend.

EXETER.—In order to expedite housing, the T.C. has decided to consider the utilisation of the uncompleted building sites in the city, of which there are stated to be 800.

FEATHERSTONE.—Plans passed: Slaughterhouse, &c., Whinney-lane, Streethouse, for Mr. J. Hoyle; conversion of conveniences, Wakefield-road, for Mr. W. Green.——The M. of H. have sanctioned the borrowing of £5,400 for relaying the Ivydale outfall sewer.

FOWEY (CORNWALL).—The B.C. has approved a contract for the laying of a new water main from Lescrow reservoir to No. 8 jetty, at a cost of £3,557.

GAINSBOROUGH.—In view of the probability that no action will be taken to free Gainsborough Bridge from tolls, an alternative proposal for the construction of a new bridge at Walkerith has been put forward, and a committee appointed to formulate a suitable scheme.——The U.D.C. has approved of several schemes for relieving unemployment, including the widening of several roads, at an estimated cost of approximately £9,500. Two additional schemes, estimated to cost £15,000, were turned down.

GUISELEY.—The West Riding C.C. Education Committee have informed the Guiseley D.E. authority that, providing the B. of E. would sanction the erection of a new elementary school at Guiseley, they, the C.C., would be prepared to defray the expenditure involved.

HAMPTON COURT.—Surrey C.C. has decided, subject to the approval of Middlesex C.C., to instruct the surveyors of the two counties to make a joint report as to the possibility and the cost of adapting Hampton Court Bridge to meet the requirements of modern traffic, and also as to the desirability and cost of erecting a new bridge and constructing the necessary approaches.

HARROGATE INFIRMARY.—A fund is being raised for the purpose of providing larger hospital accommodation at Harrogate. It is hoped to raise £20,000.

HUCKNALL (NOTTS).—It is proposed to erect a screen at Hucknall Church as a memorial to Byron, who was buried there. The cost is estimated at about £2,000.

JARROW.—The T.C. has resolved to negotiate for loans amounting to £26,783 for street and drainage work. The Ministry of Health has already sanctioned a further £3,478.

KEIGHLEY.—Plans passed: Erection of four houses, Park-lane, for Mr. Lewis Whittaker; 10 houses, High Spring Gardens-lane, for Messrs. E. Turner, Ltd.; house, Oakworth-road, for Mr. T. E. Sugden; 17 houses, Oakworth-road, for Miss Doris Midgeley. All these houses are to rank for subsidy.

KEITH.—Banffshire Education Authority has decided to carry out improvements at Keith Grammar School, estimated to cost £4,900.

KIRKCALDY.—Fife Education Authority has decided that it was expedient to provide a technical school for Kirkcaldy district, and approved of the piece of ground at present feued by the authority adjoining the High School as the site.

LANCASHIRE.—The C.C. has approved the proposed "motor way" from London to Manchester and Liverpool, on the condition that no financial responsibility attaches to the Council.

LEXDEN AND WINSTREE.—The R.D.C. is applying to the M. of H. for permission to borrow £15,000 to build houses.

LINCOLN.—At a meeting of the Court of Sewers, the Town Clerk attended and outlined the Corporation's scheme for improving traffic facilities in various thoroughfares, the cost of which would be anything between £50,000 and £100,000.

LLANDUDNO.—The T.C. intends to open up the Maesdu Estate for building purposes; the Estate will contain both an 18-hole and 9-hole golf courses.

LLANELLY.—The B.C. is to lay out Town Hall-square, and has called for plans and estimates.

LONDON.—The L.C.C. purpose expending £57,500 on the construction of a new sewer in Streatham-hill and Brixton-hill.

LONDON (HACKNEY).—Plans passed by B.C.: Alterations, Eton Mission Men's Club, Gainsborough-road for R. Brown, Bros.; factory, 43, Well-street, for E. B. Holmes & Co.

LONDON (HAMMERSMITH).—Drainage plans passed by B.C.: "Trafalgar" public-house, Bramley-road, for Watney, Combe, Reid & Co., Ltd.; 25, Caxton-road, for W. Wilson; 43, Rylett-road, for J. E. Connell; Bottling Stores, Scrubbs-lane, for United Dairies, Ltd.; "Rivercourt," The Mall, for F. C. Hoskins & Co.; 90 and 88, Uxbridge-road, for D. Greig; 135, Latimer-road, for T. Watts.

LONDON (WANDSWORTH).—Plans passed by B.C.: Phœnix Construction Co., house, Keswick-road, Putney; Messrs. Lavington (1916), Ltd., house and garage, Clarence-road, Clapham South; Messrs. Grace & Marsh, Ltd., addition to the Froebel Educational Institute, Grove House, Roehampton-lane, Putney; Mr. S. J. Mulliner, house, Allfarthing-lane, Springfield; Messrs. Chapple & Utting, 24 houses, Pendennis Estate, Streatham; Messrs. Holloway Bros. (London), Ltd., three houses, Herondale-avenue, Springfield.

LONGFIELD.—The M. of H. has sanctioned the B.C.'s proposal for a convalescent home at Longfield, Kent.

LOUTH.—It is proposed to erect a new school in connection with Louth Grammar School, which numbers amongst its old scholars Sir John Franklin and Lord Tennyson.

MALLING.—Plans passed by R.D.C.: Cottage at Old Mill, Ditton, for Messrs. A. E. Reed & Co.; bungalow at London-road, Ditton, for Mr. B. H. Wood; cottage at Millhall, Aylesford, for Messrs. Reed & Co.; bungalow at Ditton, for Mr. R. A. Tappenden; four cottages at Station-road, Aylesford, for Messrs. Reed & Co.

MERTHYR TYDFIL.—The B.C. has decided to proceed with the Pant-road reconstruction scheme.

MATLOCK.—The Ministry of Health has granted permission for the borrowing of nearly £30,000 in connection with the North Darley water scheme.

MILFORD.—The U.D.C. is negotiating with the War Office for use of Hubeston Fort for tenements. The estimated cost of necessary repairs is £3,000.

MITCHAM.—The Southern Railway has decided to construct a new station at Sandy-lane, between Mitcham Junction and Streatham.

MONMOUTHSHIRE.—The G.W.R. Co. has offered to acquire land at New Inn from Pantes U.D.C. for houses for their employees.——Crickhowell Council has applied to borrow £1,150 for immediate road work.——A public meeting at Brynmawr resolved to urge the war memorial committee to erect a monument in Market-square. £600 is available for the purpose.——The Abertillery U.D.C. has applied to borrow £17,000 for road works.

NEWQUAY (CORNWALL).—The U.D.C. has approved of a further nine houses for the Government subsidy.

NORMANTON.—Plans passed by U.D.C.: Mr. C. J. Foster, for bungalows off Dalefield-road, and two houses off Dalefield-road, for Mr. G. H. Wood.

NORTHUMBERLAND.—The C.C. has agreed to a scheme for resurfacing county roads, at an estimated cost of £163,000.

OTLEY.—The Council are to erect 58 non-parlour type houses with three bedrooms each, at a cost of £455 each, inclusive of streets, sewers and site.

PENZANCE.—The T.C. has decided to sell the island site on the Promenade for building purposes, with a proviso that purchasers shall erect a suitable building.

PONTEFRACT.—Plans passed by R.D.C.: House, west of Wheldale Lodge, for the Airedale Colliery Co., Ltd.; school alterations, Cutsyke, for the West Riding C.C.; house, Redhill, for Miss Armitage; house, Hazel Farm, Glasshoughton, for Mr. J. Wright.

PORTKNOCKNIE.—The T.C. has given instructions to Messrs. Palmer & Lewis, engineers, London, to proceed with the first half of a £50,000 extension of the harbour.

RHONDDA.—The Education Committee is negotiating for land adjoining Bodringallt School.——The Committee has instructed preparation of plans for adaptation of Pentre Crafts School to Junior Technical School, and of Ton Domestic Centre alterations.——The Porth Hospital is to be extended.

RIVER SEVERN.—The G.W.R. Engineers are surveying the approaches to the proposed combined road and railway bridge across the Severn at Beachley, near Chepstow. A proposal to provide a road bridge over the Severn, to avoid the detour round Gloucester, is receiving a great deal of support in S. Wales.

ROTHERHAM.—Application is being made by the B.C. to the Ministry of Health for sanction to erect 150 additional houses, all of which are to rank for the joint subsidy. An inquiry in respect to a site for 40 houses for the L.M. & S.R. Co.'s own workmen has been held. Plans have been approved for the erection of 93 houses at Brampton Bierlow, for the Cortonwood Colliery Co., Ltd.

SEAHAM HARBOUR.—Plans passed by U.D.C.: Two houses in Princess-road, for Mr. T. Curry; tea-room on the seabanks at the North Beach, and extensions to the Seaham Golf Club's pavilion.

SEDGEFIELD.—The R.D.C. has instructed their clerk to negotiate with the Ministry of Health for a loan of £15,000 for housing purposes. It is expected that a maximum of 150 houses will be commenced within the next three months in order to qualify for the extra subsidy of £25 the Council is offering.

SHEPSHED (NOTTS).—The U.D.C. has decided on a scheme of extension of the sewage works, and 20 acres are to be purchased and the work, commenced immediately.

SILSDEN.—The Council's Surveyor has been instructed to invite tenders for the relaying of the Lecture Room floor at the Town Hall with maple wood or other suitable covering.

STAFFORD.—Mr. H. R. Hooper, an inspector of the M. of H., has held an inquiry into an application by the T.C. for an amendment of the Corporation Acts to enable the Corporation (1) to borrow for the purposes of their water undertaking further sums not exceeding £30,000; (2) to extend the Corporation's water limits so as to include the parishes of Creswell and Brocton, in the Rural District of Stafford; and Coppenhall, Dunston, and Acton Trussell, with Bednall, in the Rural District of Cannock.

STANLEY.—The South Moor Colliery Co., Ltd., has informed the U.D.C. that they propose to erect a further batch of houses for their workmen, and not take advantage of either the Council's subsidy or the Government's.

STREET.—The U.D.C. has decided to have plans prepared for 25 houses.

SUNBURY-ON-THAMES.—It is proposed to build 100 bungalows on a nineteen-acre site in Vicarage-road.

SUNDERLAND.—Plans for the erection of 31 houses of various dimensions under the Housing Act, 1923, have been approved by the T.C.

SWANSEA.—The Housing Committee has considered the advisability of erecting concrete houses. The Chairman submitted the report of the deputation from Swansea which visited Leeds and inspected the concrete houses there, and said the Committee might decide to erect about 250 concrete houses on the Maesteg site instead of the eighteen ordinary houses contemplated.—The G.W.R. Co. have made a start with the station improvements, which are estimated to cost £500,000 and take three years to complete.

SWINDON.—The Ministry of Health has approved the grant of a subsidy of £75 per house in respect of the following:—Eighty-eight houses (including eight bungalows) to be erected by Mr. A. J. Colborne; 16 houses to be erected by Mr. E. W. Beard; 16 houses to be erected by Mr. H. C. Cook, all of which are to be completed by December 31, 1924.

TENBY.—Plans passed by B.C.: Alterations and additions to Coburg Hotel, for Mrs. Homer; alterations to Church House, for Rector (architect in both cases Mr. E. C. Thomas); plans for sewering near Marsh-road, for Mr. T. Thomas (assent deferred).——

(Continued on page 831.)

* See also our List of Contracts, Competitions, etc.

PRICES CURRENT OF MATERIALS.*

[Owing to the exceptional circumstances which prevail at the present time, prices of materials should be confirmed by inquiry.—Ed.]

BRICKS, &c.

Per 1,000 Alongside, in River Thames up to London Bridge.

	£ s. d.
Best Stocks	4 2 0
Second Hard Stocks	3 17 0

Per 1,000. Delivered at London Goods Stations.

	£ s. d.		£ s. d.
Flettons, at King's Cross	2 13 3	Best Blue Pressed Staffs.	9 11 6
Do. grooved for plaster	2 15 3	Do. Bullnose	10 1 6
Do. Bullnose	3 8 3	Blue Wire Cuts	7 11 6
Best Stourbridge Fire brick :—			
2½ in.	11 3 0	3 in.	13 2 0
GLAZED BRICKS—			
Best White Ivory, and Salt Glazed Stretchers	22 0 0	D'ble Str'tch'rs	30 10 0
Headers	21 10 0	D'ble Headers	27 10 0
Quoins. Bull-nose and 4½ in. Flats	28 10 0	One Side and two Ends	31 10 0
		Two Sides and one End	32 10 0
		Splays and Squints	30 0 0

Second Quality, £1 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours, Hard Glaze, £5 10s. extra over white.

BREEZE CONCRETE SLABS.

Delivered London.

	s. d.		s. d.
2 in. per yd. super	2 1	3 in. per yd. super	2 9
2½ in. ,,	2 5	4 in. ,,	3 7

	s. d.	
Thames Ballast	10 6	per yard.
Pit Sand	14 9	,, ,,
Thames Sand	15 6	,, ,,
Best Washed Sand	15 6	,, ,,
½ in. Shingle for Ferro-Concrete	14 0	,, ,,
¼ in. ,,	15 0	,, ,,
¼ in. Broken Brick ,,	10 6	,, ,,
Pan Breeze	5 6	,,

delivered 2 miles radius Paddington.

Per ton delivered in London area in full van loads.

Best Portland Cement, British Standard Specification Test £2 18 0 to £3 3 6 51/- alongside at Vauxhall in 80-ton lots.

Ferrocrete per ton extra on above	0 10 0
Super Cement	4 8 0
Roman Cement	8 15 0
Parian Cement	5 15 0
Keene's Cement, White	5 15 0
,, ,, Pink	5 10 0
Plaster, Coarse, Pink	3 0 0
,, ,, White	3 12 6
,, Fine	5 12 0
Sirapite, Coarse	3 9 6
,, Finish	3 17 6
Grey Stone Lime	2 10 9
Chalk Lime	2 10 9
Best Ground Blue Lias Lime	2 13 6
Hair	17 0 0
Granite Chippings	1 12 0

NOTE.—Sacks are charged 1s. 9d. each and credited 1s. 6d. if returned in good condition within three months, carr. pd.

Stourbridge Fireclay in s'cks 35s. 0d. per ton at rly. dpt.

STONE.

	s. d.
BATH STONE—delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube	2 9½
Do. do. delivered in railway trucks at Nine Elms, L. & S.W.R., per ft. cube	2 11½
PORTLAND STONE—	
Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Nine Elms, L. & S.W.R., South Lambeth Station, G.W.R., and Westbourne Park, Paddington, G.W.R., per ft. cube	4 4
Do. do. delivered on road wagons at above stations, per ft. cube	4 5
White basebed, 3d. per ft. cube extra.	

NOTE.—½d. ft. cube extra for every foot over 20 ft. *average*, and ½d. beyond 30 ft.

HOPTON-WOOD STONE.

Delivered at any Goods Station, London.

Small random blocks, up to 10 ft. cube. Per ft. cube	7/-
Random blocks from 10 ft. and over ,,	17/-
Sawn two sides ,,	27/-
Sawn three or four sides ,,	32/-

YORK STONE, BLUE—*Robin Hood Quality.*

Delivered at any Goods Station London.	s. d.
6 in. sawn two sides landings to sizes (under 30 ft. super.) Per Ft. Super	5 3
6 in. rubbed two sides, ditto ,,	5 9
3 in. sawn two sides slabs (random sizes) ,,	2 1½
2 in. to 2½ in. sawn one side slabs (random sizes) ,,	1 5½
1½ in. to 2 in. ditto, ditto ,,	1 3
HARD YORK—	
Delivered at any Goods Station London.	
Scappled random blocks Per Ft. Cube	5 6
6 in. sawn two sides landing to sizes (under 40 ft. super.) Per Ft. Super	5 4½
6 in. rubbed two sides ditto ,,	6 0½
4 in. sawn two sides slabs (random sizes) ,,	2 10
3 in. ditto. ditto ,,	2 5
2 in. self-faced random flags Per Yard Super	7 11

ARTIFICIAL STONE.

Delivered in London Area in full van loads.	s. d.
Plain per ft. cube	6 6
Moulded ,, ,,	7 9
Cills ,, ,,	8 3

WOOD.

GOOD BUILDING DEAL.

Inches.	per stan.	Inches.	per stan.
4 × 11	£34 0	3 × 6	£25 0
4 × 9	34 0	3 × 11	34 0
4 × 8	29 0	2 × 11	34 0
4 × 7	28 0	3 × 9	33 0
3 × 8	26 10	2½ × 9	33 0
3 × 7	26 0	3 × 4½	24 0
2½ × 7	26 0	3 × 4	24 0

WOOD (*Continued*).

PLANED BOARDS.

1 × 11	£38 10	1 × 9	£36 0

PLAIN EDGE FLOORING.

Inches.	per sq.	Inches.	per sq.
¾	21/-	1¼	33/6
1	23/-	1½	38/6
1	26/6		

TONGUED AND GROOVED FLOORING.

Inches.	per sq.
1	26/6
1¼	33/6
1½	38/6

MATCHINGS (BEST).

Inches	per sq.
¾	17/6
¾	22/-
1	26/-

Inches	BATTENS	s. d.
¾ × 2		2 4 per 100 ft.

SAWN LATHS.

Per bundle				0	2 10
Dry Walnscot Oak, per ft. super, as inch	0	2	0 to	0	2 6
¼ in. do.	do.	0	1	6 to	0	2	0
Dry Mahogany—Honduras, Tabasco, African, per ft. super, as inch	0	1	9 to	0	2	6
Cuba Mahogany	0	3	0 to	0	3	6
Teak (Rangoon, Moulmein or Java), per load	45	0	0 to	50	0	0
American Whitewood planks, per ft. cube	0	14	0 to	0	16	0
Best Scotch Glue, per cwt.	4	10	0 to	—		
Liquid Glue, per cwt.	4	7	0 to	5	10	0

SLATES.

1st quality slates from Bangor or Portmadoc in truck loads delivered London area. Per 1,000 of 1,200.

	£ s. d.		£ s. d.
24 by 12	37 12 6	18 by 10	21 2 6
22 by 12	34 0 0	18 by 9	18 12 6
22 by 11	31 5 0	16 by 10	17 12 6
20 by 12	29 15 0	16 by 8	13 15 0
20 by 10	25 12 6		

TILES.

	Per 1,000 f.o.r. London. £ s. d.
Best machine-made tiles from Broseley or Staffordshire district	5 7 6
Ditto hand made ditto	5 12 6
Ornamental ditto	5 17 6
Hip and valley tiles (per dozen) { Hand made	0 9 6
Hip and valley tiles (per dozen) { Machine made	0 9 0

METALS.

JOISTS, GIRDERS, &c., TO LONDON STATION PER TON—

	£ s. d.
R. S. Joists, cut and fitted	13 10 0
Plain Compound Girders	15 10 0
,, Stanchions	17 10 0
In Roof Work	20 10 0

MILD STEEL ROUNDS.

To London Station, per ton.

Diameter.	£ s. d.	Diameter.	£ s. d.
¾ in.	16 10 0	⅝ in. to ¾ in.	13 10 0
½ in.	14 10 0	½ in. to 2½ in.	13 0 0

WROUGHT-IRON TUBES AND FITTINGS—

(Discount off List for lot of not less than £7 net value delivered direct from Works, 2½ per cent. less above gross discount; carriage forward if sent from London Stocks.)

	Tubes.	Fittings.	Flanges.
Gas	52½%	52½%	62½%
Water	47½%	47½%	57½%
Steam	42½%	42½%	52½%
Galv'd—			
Gas	37½%	42½%	52½%
Water	31½%	37½%	47½%
Steam	25 %	32½%	42½%

C.I. HALF-ROUND GUTTERS—London Prices, ex Works.

Per yd. in 6 ft. lengths.	Gutters.	Angles and Nozzles.	Stop Ends.
3 in.	1/1½	11d.	3½d.
3½ in.	1/2½	1/0½	3½d.
4 in.	1/4	1/1½	3½d.
4½ in.	1/5½	1/4	4d.
5 in.	1/7½	1/5½	5d.

O.G. GUTTERS.

3 in.	1/6½	1/2½	3½d.
3½ in.	1/6½	1/2½	3½d.
4 in.	1/7½	1/4	3½d.
4½ in.	1/9½	1/6½	4d.
5 in.	2/1½	1/9	5d.

RAIN-WATER PIPES, &c.

Per yd. in 6 fts.	Pipe.	Bends, stock angles.	Branches, stock angles.
2 in. plain	1/7½	1/1½	1/8
2½ in. ,,	1/9½	1/4	2/0½
3 in. ,,	2/1½	1/8	2/5½
3½ in. ,,	2/6½	1/11½	2/10½
4 in. ,,	2/11½	2/4½	3/5½

L.C.C. COATED SOIL PIPES—London Prices ex works.

	Pipe.	Bends, stock angles.	Branches, stock angles.
	s. d.	s. d.	s. d.
2 in. per yd. in 6fts plain	3 0½	2 2½	2 8
2½ in. ,,	3 6½	2 5½	3 3½
3 in. ,,	4 2½	2 8	4 0½
3½ in. ,,	4 7	3 3½	4 8½
4 in. ,,	5 1	3 9½	5 5

L.C.C. COATED DRAIN PIPES—London Prices ex works.

	Pipe.	Bends, stock angles.	Branches, stock angles.
	s. d.	s. d.	s. d.
3 in. per yd. in 9ft. lengths	4 9	5 8	8 10
4 in. ,, ,,	6 3	6 8	11 4
5 in. ,, ,,	7 6	11 6	18 2
6 in. ,, ,,	8 10	14 4	23 5

IRON—	Per ton in London. £ s. d.		£ s. d.
Common Bars	13 10 0	to	14 10 0
Staffordshire Crown Bars—good merchant quality	14 0 0	..	15 0 0
Staffordshire "Marked Bars"	17 0 0	..	18 0 0
Mild Steel Bars	12 10 0	..	13 10 0

METALS (*Continued*).

	£ s. d.		£ s. d.
Steel Bars, Ferro-Concrete quality, basis price	13 0 0	..	14 0 0
Hoop iron, basis price	16 10 0	..	17 10 0
,, Galvanised	31 0 0	..	32 0 0
Soft Steel Sheets, Black—Ordinary sizes to 20 g.	15 0 0	..	16 0 0
,, ,, ,, 24 g.	16 0 0	..	17 0 0
,, ,, ,, 26 g.	18 0 0	..	19 0 0
Sheets Flat Best Soft Steel, C.R. & C.A. quality—Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	21 10 0	..	22 10 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 22 g. and 24 g.	22 10 0	..	23 10 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 26 g.	24 10 0	..	26 10 0
Flat and Galvanised Corrugated Sheets—Ordinary sizes, 6 ft. to 9 ft. to 20 g.	21 10 0	..	22 10 0
Ordinary sizes, 6 ft. to 9 ft. to 22 g. and 24 g.	22 0 0	..	23 0 0
Ordinary sizes, 6 ft. to 9 ft. to 26 g.	24 0 0	..	25 0 0
Sheets Galvanised Flat, Best quality—Best Soft Steel Sheets, 6ft. by 2ft. to 3ft. to 20g. and thicker	23 10 0	..	24 10 0
Best Soft Steel Sheets, 22 g. and 24 g.	24 10 0	..	26 10 0
Best Soft Steel Sheets, 26 g.	26 0 0	..	27 0 0
Cut Nails, 3in. to 6 in. (under 3in. usual trade extras.)	20 10 0	..	22 0 0

METAL WINDOWS—Standard sizes suitable for complete houses, including all fittings, painting two coats, and delivery to job, average price about 1/4 to 1/7 per foot super.

LEAD, &c.

(Delivered in London.)	£ s. d.
LEAD—Sheet. English, 4 lb. and up	41 10 0
Pipe in coils	42 0 0
Soil Pipe	45 0 0
Compo pipe	47 10 0

NOTE—Country delivery, 30s. per ton extra; lots under 3 cwt., 2s. per cwt. extra and over 3cwt. and under 5 cwt., 1s.6d. per cwt. extra. Cut to sizes, 2s. cwt. extra.

Old lead, ex London area, at Mills per ton	27	0 0	—
Do., ex country, carriage forward per ton	28	0 0	—

PLUMBERS' BRASS WORK.

Delivered in London.

NEW RIVER PATTERN SCREW DOWN BIB COCKS FOR IRON.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
29/-	45/-	76/-	153/-	246/-	510/- per doz.

NEW RIVER PATTERN SCREW DOWN STOP COCKS AND UNIONS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
41/6	62/-	92/-	174/-	300/-	588/- per doz.

NEW RIVER PATTERN SCREW DOWN MAIN FERRULES.

½ in.	¾ in.	1 in.
39/6	60/-	116/6 per doz

CAPS AND SCREWS.

1¼ in.	1½ in.	2 in.	3 in.	3½ in.	4 in.
7/6	10/-	14/-	23/-	30/-	42/- per doz.

DOUBLE NUT BOILER SCREWS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2in.
7/6	11/6	17/-	29/-	36/-	63/- per doz.

BRASS SLEEVES.

1¼ in.	2 in.	3 in.	3½ in.	4 in.
10/-	12/-	20/-	24/-	31/- per doz.

NEW RIVER PATTERN CROYDON BALL VALVES, S.F.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.
35/-	56/-	98/-	162/-	228/- per doz.

DRAWN LEAD P. & S. TRAPS WITH BRASS CLEANING SCREW.

	1¼ in.	1½ in.	2 in.	3 in.	
8 lbs. P. traps	33/-	41/-	56/-	101/-	per doz.
8 lbs. S. traps	35/-	45/-	66/-	126/-	

COPPER—	£ s. d.		
Strong Sheet per lb.	0 2 3	..	—
Thin ,, ,,	0 2 4	..	—
Copper nails ,,	0 2 3	..	—
Copper wire ,,	0 2 4	..	—
TIN—English Ingots ,,	0 2 1	..	—
SOLDER—Plumbers' ,,	0 1 0	..	—
Tinmen's ,,	0 1 2	..	—
Blowpipe ,,	0 1 4	..	—

PAINTS, &c.

	£ s. d.
Raw Linseed Oil, in pipes per gallon	0 3 7
,, ,, ,, in barrels ,,	0 3 9
,, ,, ,, in drums ,,	0 4 0
Boiled ,, ,, in barrels ,,	0 4 1
,, ,, ,, in drums ,,	0 4 3
Turpentine in barrels ,,	0 6 6
,, in drums (10 gall.) ,,	0 6 9
Genuine Ground English White Lead, per ton (In not less than 5 cwt. casks.)	56 5 0
GENUINE WHITE LEAD PAINT—"Father Thames," "Nine Elms," "Park," "Supremus" and other best brands (in 14 lb. tins) not less than 5 cwt. lots per ton delivered	79 10 0
Red Lead, Dry (packages extra) per ton	43 0 0
Best Linseed Oil Putty per cwt.	0 16 0
Filocot per cwt.	0 15 6
Size, XD Quality /kn.	0 3 6

[Concluded on next page.]

* The information given on this page has been specially compiled for THE BUILDER and is copyright. Our aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

PRICES CURRENT OF MATERIALS (*contd.*)

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES AND IN SQUARES IN ORDINARY SIZES.

	Per Ft.		Per Ft.
15 oz. fourths	3½d.	32 oz. fourths	8½d.
15 ,, thirds	4½d.	32 ,, thirds	10½d.
21 ,, fourths	5d.	Obscured Sheet, 15 oz.	4d.
21 ,, thirds	6½d.	21 ,,	5½d.
26 ,, fourths	6d.	Fluted 15oz. 6½d., 21oz.	9½d.
26 ,, thirds	7½d.	En'lled 15 ,, 5½d., 21 ,,	7½d.

Extra price according to size and substance for square cut from stock.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.

	Per Ft.
Rolled plate	4½d.
Rough rolled	5½d.
Rough rolled	5½d.
Figured Rolled, Oxford Rolled, Baltic, Oceanic, Arctic, Stippolyte, and small and large Flemish white	6½d.
Ditto, tinted	9d.
Rolled Sheet	6d.
White Rolled Cathedral	5½d.
Tinted do.	7½d.

Cast Plate is same price as rough rolled.

VARNISHES, &c.

		Per gallon £ s. d.
Oak Varnish	Outside	0 14 0
Fine ditto	ditto	0 16 0
Fine Copal	ditto	0 18 0
Pale Copal	ditto	1 0 0
Pale Copal Carriage	ditto	1 4 0
Best ditto	ditto	1 12 0
Floor Varnish	Inside	0 18 0
Fine Pale Paper	ditto	0 18 0
Fine Copal Cabinet	ditto	1 2 6
Fine Copal flatting	ditto	1 0 6
Hard drying Oak	ditto	0 18 0
Fine Hard drying Oak	ditto	0 19 0
Fine Copal Varnish	ditto	1 0 0
Pale ditto	ditto	1 2 0
Best ditto	ditto	1 12 0
Best Japan Gold Size		0 12 0
Best Black Japan		0 12 0
Oak and Mahogany Stain (water)		0 12 0
Brunswick Black		0 9 0
Berlin Black		0 14 0
Knotting (patent)		1 5 0
French and Brush Polish		0 17 6
Liquid Dryers in Terebine		0 9 0
Guirass Black Enamel		0 7 0

PROPOSED NEW BUILDINGS.

(*Continued from p.* 829)

The G.W.R. Co. has requested the Council to make up the road and path near the station, according to agreement (estimate £2,500), and has called for plans and is consulting with the Company's Divisional Engineer.

TIVERTON (DEVON).—The R.D.C. has decided to increase the Ministry of Health's subsidy per house to £125 and £150, according to the class of house erected.——The T.C. unanimously resolved, in order to encourage building, to increase the Government subsidy to £120, and to purchase sites and offer the land to private individuals on the most favourable terms.

TORQUAY.—The widening of the sea front promenade is to be taken in hand almost immediately.—The Ministry of Transport has held an inquiry into a proposal to construct a cliff railway at Babbacombe Downs.

TREDEGAR.—The U.D.C. is to consider a scheme for the construction of high level reservoirs.

TUTBURY.—The M. of T. have informed the local R.D.C. that a grant of £578 will be made by them towards the cost of building a new bridge between Tutbury and Rangemore to replace the one swept away by a storm last July. The work is to begin at once.

WEST HARTLEPOOL.—Plans passed by T.C.: Mr. F. M. Gibbon, nine houses, Rossall-street; Committee of Col. Thomlinson Institute, Temperance Institute, Waldon-street and Houghton-street: Mr. E. M. Tweddle, 10 houses, Allendale-street, Seaton Carew; Mr. A. Stephenson, 25 semi-detached houses, Ashley-gardens; The South Durham Steel and Iron Co., Ltd., converting stores into a laboratory, Seaton Carew Iron Works; H. Mason, Ltd., carriage house Park-road.

WETHERBY. — Amongst plans passed by the U.D.C. is one for the extension of dining-rooms and kitchen improvement, for the Executive of the Race-course Co., Ltd.

FIRES.

HARTLEPOOL.—The fitting and brass-finishing shops at Messrs. Irvine's shipyard have been destroyed by fire.

LANARK.—Sunnyside, the residence of General Stevenson, at Kirkfield Bank, Lanark, containing twenty-six rooms, has been gutted by fire.

LIVERPOOL.—Considerable damage has been done by a fire which occurred on the premises of Messrs. R. L. Hall & Co., Ltd., flock manufacturers and general merchants, 139–141, Vauxhall-road.

NORTHALLERTON.—The large linoleum factory of Messrs. Sykes, Mills & Co., at Northallerton, Yorks, has been the scene of a fire which took seven hours to subdue, one wing of the works being gutted.

WALSALL.—A fire at the leather works of Sir E. T. Holden & Sons, Walsall, caused £20,000 damage, a block of buildings being completely destroyed.

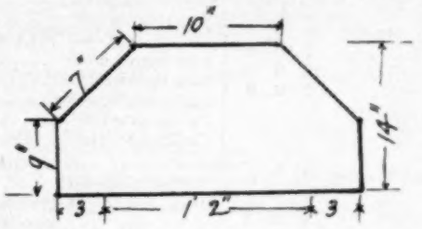
STANDARD METHOD OF MEASUREMENT.

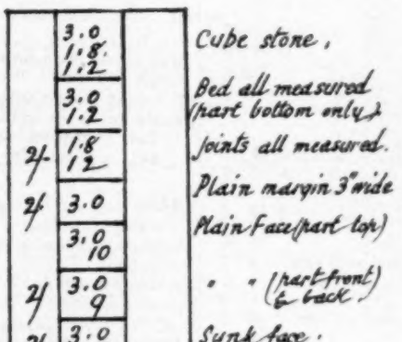
"QUANTITIES" writes:—

SIR,—The "Standard Method of Measurement of Building Works," published by the Surveyors' Institution in 1922, states:—

Page 25, item 26: "Face labours shall be described and shall include all preparatory works and preparatory labours, except as follows," &c.

There appears to be confusion in Manchester as to exactly what this covers. I give a simple example, and would be much obliged if you could say where the above paragraph is correctly interpreted. If this should take too much of your space, could you tell me where I can get reliable information, as most text-books were





not based on the Standard Method published 1922

[**** Our correspondent is quite correct in his reading of the "Standard Method of Measurement of Building Works" instructions as to the measurement of stone. In former times it was customary to measure "beds and joints" to all faces as a preliminary labour, but this system has been abandoned for a good many years.—ED.]

NEW BUILDINGS IN LONDON.

Carlton House-terrace.—ALTERATIONS.—We understand that No. 8, Carlton House-terrace is to be converted into several reception flats with rents ranging from £600 per annum to £2,000 per annum. These flats will be fitted with internal telephones, service lifts, modern sanitary fittings, passenger lift, &c., and accommodation will consist of dining rooms, drawing rooms, boudoirs, bedrooms, and separate kitchens and servants' offices, &c., to each flat. The architects are Messrs. F. W. Rees & Archer-Betham, of 44, Park-lane, Croydon.

City.—The Corporation of London has decided to widen Houndsditch to 50 feet from Bishopsgate to Phil's-buildings, and to 45 ft. from there to Cutler-street, subject to the L.C.C. agreeing to defray half the cost, estimated at £192,460.

Lambeth.—The B.C. has approved the proposal of the L.C.C. to extend the West Norwood tramway to the Crystal Palace.

St. Pancras.—The B.C. is considering building 72 flats at Somers Town, at a cost of £62,000.

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach him not later than Tuesday evening.

* Denotes *accepted*. † Denotes *provisionally accepted*.
‡ Denotes *recommended for acceptance*.
§ Denotes *accepted subject to modifications*.

ABBOT'S LANGLEY.—For erection of three detached houses. Messrs. Stimpson, Lock & Vince architects, Watford:—

F. Stevens, Pimlico	£4,414 10
Walter Brown's Building Co., Ltd., Shepherd's Bush	3,014 0
Daniels & Cometti, Leyton	2,970 0
*Payne Bros., Leavesden	2,660 0

ABERYSTWYTH.—For re-roofing, &c., of Nos. 21–23, Prospect-place, for the B.C.:—

*J. Evans, Trefechan	£210 10

BEESTON.—For making-up portion of Fairfield avenue, for the U.D.C. Mr. E. A. Bush, Surveyor Beeston:—

J. W. Brough, Beeston	£1,543 11 0
H. H. Barry, Nottingham	1,350 0 0
W. Shaw, Nottingham	1,334 9 0
Hodgsons, Ltd., Nottingham	1,324 9 0
C. Caumans, Nottingham	1,322 9 7
J. W. Damer, Nottingham	1,185 10 0
E. Somerfield, West Budgford	1,165 4 8
J. Thraves, Stapleford	1,150 0 0

BRADFORD.—Reconstruction of warehouse premises in Duke-street and Piccadilly, for Messrs. Edwin Greenhough:—

Mason—J. Schofield (Wyke), Ltd.
Plasterer—H. Sugden.
Plumber and Heating Engineer—R. Hartley.

BRADFORD.—Erection of a new church for the Roman Catholic authority in Ingleby-road, to be known as the Church of St. William:—

W. Farnish & Sons, Mill-street, Bradford.

BRIDGEND.—For laying sewer at Merthyr-Mawr-road, for U.D.C.:—

*E. Clarke, Bridgend	£168

CARDIFF.—For (*a*) Widening Rectory-road; (*b*) widening Caermain-road, for the R.D.C. Mr. W. Farrow, surveyor, 20, Park-place, Cardiff:—

A.

T. W. Heath (Public Works), Ltd., Kensington	£752 10 0
John Harry, Radyr	476 10 0
Wm. C. Lewis, Dinas Powis	381 1 8
Lewis & Pritchard, Ltd., Dinas Powis	375 0 0
*H. Lingham, Barry	373 0 10

B.

Seth Hill and Son, Llantrithyd	£478 4 6
John Harry, Radyr	461 16 0
D. Parfitt, Newport	453 9 6
A. G. Collins & Co., Barry	419 0 10
H. Lingham, Barry	403 5 2
*A. W. Spear, Dinas Powis	392 12 0

CHISLEHURST.—For additions to Farrington's Girls' School. Messrs. Crickmer & Foxley, architects 1, Lincoln's Inn-fields, W.C.2:—

Holliday & Greenwood, Ltd. Battersea	£45,800
F. & H. F. Higgs, Ltd., Herne Hill	44 360
Ford & Walton, London	43,870
John W. Falkner & Sons, London	43,070
Dove Bros., Ltd., Islington	42,955
Holland, & Hannen & Cubitts, Ltd., London	42,265
Higgs & Hill, Ltd., South Lambeth	42,177
Trollope & Colls, Ltd., London	41,935
Holloway Bros. London	41,127
James Carmichael, Ltd., London	40,976
Hall, Beddall & Co., London	40,137
Ashby & Horner, London	39,985
*G. E. Wallis & Sons, Ltd., Maidstone	39,336

DESBOROUGH.—For erection of 10 houses, for the U.D.C. Mr. C. D. Rochester, architect, Castle Chambers, Rothwell:—

*George Lewis, Rothwell, 2 parlour houses	£820
*A. Tailley & Son, Desborough—4 parlour houses	1,636
*Childs & Co., Finedon—4 non-parlour houses	1,520

DEWSBURY.—Erection of a new six-story mill, for Messrs. Wormald & Walker, Ltd.:—

Mason—W. Scott, Dewsbury.
Asphalter — Tunstall's Rock Asphalte Co., Ltd., Leeds.

DURHAM.—Construction of a new railway bridge, for the L. & N.E.R. Co., near Hart Station:—

Cleveland Bridge & Engineering Co., Ltd.	£14,000

EASTBOURNE.—For erection of seven cottages in the Crescent. Borough Engineer, Town Hall, Eastbourne:—

Baldwin & Co., Eastbourne	£4,332

FEATHERSTONE.—Constructing a new roof for the U.D.C. to Dutch Barn at South Featherstone Farm:—

G. T. Darnton	£120

(*Continued on page* 933.)

PRICES CURRENT OF MATERIALS.*

[Owing to the exceptional circumstances which prevail at the present time, prices of materials should be confirmed by inquiry.—Ed.]

BRICKS, &c.

Per 1,000 Alongside, in River Thames up to London Bridge.

	£ s. d.
Best Stocks	4 2 0
Second Hard Stocks	3 17 0

Per 1,000. Delivered at London Goods Stations.

	£ s. d.
Flettons, at	
King's Cross	2 13 3
Do. grooved for plaster	2 15 3
Do. Bullnose	3 8 3

Best Stourbridge Fire brick:—

2½ in.	11 3 0
3 in.	13 2 0

GLAZED BRICKS—

	£ s. d.
Best White Ivory, and Salt Glazed Stretchers	22 0 0
Headers	21 10 0
Quoins, Bullnose and 4½ in. Flats	28 10 0

Second Quality, £1 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours, Hard Glaze, £5 10s. extra over white.

	£ s. d.
Best Blue Pressed Staffs.	9 11 6
Do. Bullnose	10 1 6
Blue Wire Cuts	7 11 6
D'ble Str'tch'rs	30 10 0
D'ble Headers	27 10 0
One Side and two Ends	31 10 0
Two Sides and one End	32 10 0
Splays and Squints	30 0 0

BREEZE CONCRETE SLABS.

Delivered London.

	s. d.		s. d.
2 in. per yd. super	2 1	3 in. per yd. super	2 9
2½ in. "	2 5	4 in. "	3 7

	s. d.	
Thames Ballast	10 6	per yard.
Pit Sand	14 9	" "
Thames Sand	15 6	" "
Best Washed Sand	15 6	" "
½ in. Shingle for Ferro-Concrete	14 0	" "
¾ in. " "	15 0	" "
¾ in. Broken Brick	10 6	" "
Pan Breeze	5 6	" "

delivered 2 miles radius Paddington.

Per ton delivered in London area in full van loads.

Best Portland Cement, British Standard Specification Test £2 18 0 to £3 3 6
51/- alongside at Vauxhall in 80-ton lots.

	£ s. d.
Ferrocrete per ton extra on above	0 10 0
Super Cement	4 8 0
Roman Cement	8 15 0
Parian Cement	5 15 0
Keene's Cement, White	5 15 0
" Pink	5 10 0
Plaster, Coarse, Pink	3 0 0
" " White	3 12 6
" Fine	5 12 0
Sirapite, Coarse	3 9 6
" Finish	3 17 6
Grey Stone Lime	2 10 9
Chalk Lime	2 10 9
Best Ground Blue Lias Lime	2 13 6
Hair	17 0 0
Granite Chippings	1 12 0

NOTE.—Sacks are charged 1s. 9d. each and credited 1s. 6d. if returned in good condition within three months, carr. pd.

Stourbridge Fireclay in s'cks 35s. 0d. per ton at rly. dpt.

STONE.

BATH STONE—delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube — s. d. 2 9½

Do. do. delivered in railway trucks at Nine Elms, L. & S.W.R., per ft. cube — 2 11½

PORTLAND STONE—

Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Nine Elms, L. & S.W.R., South Lambeth Station, G.W.R., and Westbourne Park, Paddington, G.W.R., per ft. cube — 4 4

Do. do. delivered on road wagons at above stations, per ft. cube — 4 5

White basebed, 3d. per ft. cube extra.

NOTE.—½d. ft. cube extra for every foot over 20 ft. *average*, and ½d. beyond 30 ft.

HOPTON-WOOD STONE.

Delivered at any Goods Station, London.

Small random blocks, up to 10 ft. cube. Per ft. cube	7/-
Random blocks from 10 ft. and over "	17/-
Sawn two sides "	27/-
Sawn three or four sides "	32/-

YORK STONE, BLUE—*Robin Hood Quality.*

Delivered at any Goods Station London. s. d.

6 in. sawn two sides landings to sizes (under 30 ft. super.) Per Ft. Super	5 3
6 in. rubbed two sides, ditto "	5 9
3 in. sawn two sides slabs (random sizes) "	2 1½
2 in. to 2½ in. sawn one side slabs (random sizes) "	1 5½
1½ in. to 2 in. ditto, ditto "	1 3

HARD YORK—

Delivered at any Goods Station London.

Scappled random blocks Per Ft. Cube	5 6
6 in. sawn two sides landing to sizes (under 40 ft. super.) Per Ft. Super	5 4½
6 in. rubbed two sides ditto "	6 0½
4 in. sawn two sides slabs (random sizes) "	2 10
3 in. ditto. ditto "	2 5
2 in. self-faced random flags. Per Yard Super	7 11

ARTIFICIAL STONE.

Delivered in London Area in full van loads. s. d.

Plain per ft. cube	6 6
Moulded " "	7 9
Cills " "	8 3

WOOD.

GOOD BUILDING DEAL.

Inches.	per stan.	Inches.	per stan.
4 × 11	£34 0	3 × 6	£25 0
4 × 9	34 0	3 × 11	34 0
4 × 8	29 0	2 × 11	24 0
4 × 7	28 0	3 × 9	33 0
3 × 8	28 10	2½ × 9	33 0
3 × 7	24 0	3 × 4½	24 0
2½ × 7	26 0	3 × 4	24 0

WOOD (*Continued*).

PLANED BOARDS.

1 × 11	£38 10	1 × 9	£36 0

PLAIN EDGE FLOORING.

Inches.	per sq.	Inches.	per sq.
¾	21/-	1¼	35/6
⅞	23/-	1½	38/6
1	26/6		

TONGUED AND GROOVED FLOORING.

Inches.	per sq.
1	26/6
1¼	33/6
1½	38/6

MATCHINGS (BEST).

Inches	per sq.
¾	17/6
⅞	22/-
1	26/-

Inches	BATTENS	s. d.
¾ × 2		2 4 per 100 ft.

SAWN LATHS.

Per bundle				0	2 10
Dry Wainscot Oak, per ft. super, as inch	0	2	0 to	0	2 6
¼ in. do. do.	0	1	6 to	0	2 0
Dry Mahogany—Honduras, Tabasco, African, per ft. super, as inch	0	1	9 to	0	2 6
Cuba Mahogany	0	3	0 to	0	3 6
Teak (Rangoon, Moulmein or Java), per load	45	0	0 to	50	0 0
American Whitewood planks, per ft. cube	0	14	0 to	0	16 0
Best Scotch Glue, per cwt.	4	10	0 to	—	
Liquid Glue, per cwt.	4	7	0 to	5	10 0

SLATES.

1st quality slates from Bangor or Portmadoc in truck loads delivered London area. Per 1,000 of 1,200.

	£ s. d.		£ s. d.
24 by 12	37 12 6	18 by 10	21 2 6
22 by 12	34 0 0	18 by 9	18 12 6
22 by 11	31 5 0	16 by 10	17 12 6
20 by 12	29 15 0	16 by 8	13 15 0
20 by 10	25 12 6		

TILES.

	Per 1,000 f.o.r. London. £ s. d.
Best machine-made tiles from Broseley or	5 7 6
Staffordshire district	5 7 6
Ditto hand made ditto	5 12 6
Ornamental ditto	5 17 6
Hip and valley tiles (per dozen) Hand made	0 9 6
Machine made	0 9 0

METALS.

JOISTS, GIRDERS, &c., TO LONDON STATION PER TON—

	£ s. d.
R. S. Joists, cut and fitted	13 10 0
Plain Compound Girders	15 10 0
" Stanchions	17 10 0
In Roof Work	20 10 0

MILD STEEL ROUNDS.

To London Station, per ton.

Diameter.	£ s. d.	Diameter.	£ s. d.
⅜ in.	16 10 0	⅝ in. to ⅞ in.	13 10 0
½ in.	14 10 0	1 in. to 2½ in.	13 0 0

WROUGHT-IRON TUBES AND FITTINGS—

(Discount off List for lot of not less than £7 net value delivered direct from Works, 2½ per cent. less above gross discount; carriage forward if sent from London Stocks.)

	Tubes.	Fittings.	Flanges.
Gas	52½%	52½%	62½%
Water	47½%	47½%	57½%
Steam	42½%	42½%	52½%
Galv'd—			
Gas	37½%	42½%	52½%
Water	31½%	37½%	47½%
Steam	25 %	32½%	42½%

C.I. HALF-ROUND GUTTERS—London Prices, ex Works.

Per yd. in 6 ft. lengths.	Gutters.	Angles and Nozzles.	Stop Ends.
3 in.	1/1½	11d.	3½d.
3½ in.	1/2½	1/0½	3½d.
4 in.	1/4	1/1½	3½d.
4½ in.	1/5½	1/4	4d.
5 in.	1/7½	1/5½	5d.

O.G. GUTTERS.

3 in.	1/6½	1/2½	3½d.
3½ in.	1/6½	1/2½	3½d.
4 in.	1/7½	1/4	3½d.
4½ in.	1/9½	1/6½	4d.
5 in.	2/1½	1/9	5d.

RAIN-WATER PIPES, &c.

Per yd. in 6 fts.	Pipe.	Bends, stock angles.	Branches, stock angles.
2 in. plain	1/7½	1/1½	1/8
2½ in. "	1/9½	1/4	2/0½
3 in. "	2/1½	1/8	2/5½
3½ in. "	2/6½	1/11½	2/10½
4 in. "	2/11½	2/4½	3/5½

L.C.C. COATED SOIL PIPES—London Prices ex works.

	Pipe.	Bends, stock angles.	Branches, stock angles.
	s. d.	s. d.	s. d.
2 in. per yd. in 6fts plain	3 0½	2 2½	2 8
2½ in. "	3 6½	2 5½	3 3½
3 in. "	4 2½	2 8	4 0½
3½ in. "	4 7	3 3½	4 8½
4 in. "	5 1	3 9½	5 5

L.C.C. COATED DRAIN PIPES—London Prices ex works.

	Pipe.	Bends, stock angles.	Branches, stock angles.
	s. d.	s. d.	s. d.
3 in. per yd. in 9ft. lengths	4 9	5 8	8 10
4 in. " "	6 3	8 8	11 4
5 in. " "	7 6	11 6	18 2
6 in. " "	8 10	14 4	23 5

IRON—	Per ton in London. £ s. d.		£ s. d.
Common Bars	13 10 0	to	14 10 0
Staffordshire Crown Bars—good merchant quality	14 0 0	..	15 0 0
Staffordshire "Marked Bars"	17 0 0	..	18 0 0
Mild Steel Bars	12 10 0	..	13 10 0

METALS (*Continued*).

	£ s. d.		£ s. d.
Steel Bars, Ferro-Concrete quality, basis price	13 0 0	..	14 0 0
Hoop iron, basis price	16 10 0	..	17 10 0
Galvanised	31 0 0	..	32 0 0
Soft Steel Sheets, Black—Ordinary sizes to 20 g.	15 0 0	..	16 0 0
" " " 24 g.	16 0 0	..	17 0 0
" " " 26 g.	18 0 0	..	19 0 0
Sheets Flat Best Soft Steel, C.R. & C.A. quality—Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 20 g.	21 10 0	..	22 10 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 22 g. and 24 g.	22 10 0	..	23 10 0
Ordinary sizes, 6 ft. by 2 ft. to 3 ft. to 26 g.	24 10 0	..	26 10 0
Flat and Galvanised Corrugated Sheets—Ordinary sizes, 6 ft. to 9 ft. to 20 g.	21 10 0	..	22 10 0
Ordinary sizes, 6 ft. to 9 ft. to 22 g. and 24 g.	22 0 0	..	23 0 0
Ordinary sizes, 6 ft. to 9 ft. to 26 g.	24 0 0	..	25 0 0
Sheets Galvanised Flat, Best quality—Best Soft Steel Sheets, 6ft. by 2ft. to 3ft. to 20g. and thicker	23 10 0	..	24 10 0
Best Soft Steel Sheets, 22 g. and 24 g.	24 10 0	..	26 10 0
Best Soft Steel Sheets, 26 g.	26 0 0	..	27 0 0
Cut Nails, 3in. to 6 in. (under 3in. usual trade extras.)	20 10 0	..	22 0 0

METAL WINDOWS—Standard sizes suitable for complete houses, including all fittings, painting two coats, and delivery to job, average price about 1/4 to 1/7 per foot super.

LEAD, &c.

(Delivered in London.)	£ s. d.		£ s. d.
LEAD—Sheet. English, 4 lb. and up	41 10 0		
Pipe in coils	42 0 0		
Soil Pipe	45 0 0		
Compo pipe	47 10 0		
Old lead, ex London area, at Mills per ton	27 0 0	..	—
Do., ex country, carriage forward per ton	28 0 0	..	—

NOTE—Country delivery, 30s. per ton extra; lots under 3 cwt., 2s. per cwt. extra and over 3cwt. and under 5 cwt., 1s.6d. per cwt. extra. Cut to sizes, 2s. cwt. extra.

PLUMBERS' BRASS WORK.

Delivered in London.

NEW RIVER PATTERN SCREW DOWN BIB COCKS FOR IRON.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
29/	45/-	76/-	153/-	246/-	510/- per doz.

NEW RIVER PATTERN SCREW DOWN STOP COCKS AND UNIONS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
41/6	62/-	92/-	174/-	300/-	588/- per doz.

NEW RIVER PATTERN SCREW DOWN MAIN FERRULES.

½ in.	¾ in.	1 in.
39/6	60/-	116/6 per doz

CAPS AND SCREWS.

1¼ in.	1½ in.	2 in.	3 in.	3½ in.	4 in.
7/6	10/-	14/-	23/-	30/-	42/- per doz.

DOUBLE NUT BOILER SCREWS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2in.
7/6	11/6	17/-	29/-	36/-	63/- per doz.

BRASS SLEEVES.

1½ in.	2 in.	3 in.	3½ in.	4 in.
10/-	12/-	20/-	24/-	31/- per doz.

NEW RIVER PATTERN CROYDON BALL VALVES, S.F.

½ in.	¾ in.	1 in.	1¼ in,	1½ in.
35/-	56/-	98/-	162/-	228/- per doz.

DRAWN LEAD P. & S. TRAPS WITH BRASS CLEANING SCREW.

	1½ in.	1½ in.	2 in.	3 in.
8 lbs. P. traps	33/-	41/-	56/-	101/- per doz.
8 lbs. S. traps	35/-	45/-	66/-	126/- "

COPPER—	£ s. d.	
Strong Sheet per lb.	0 2 3	.. —
Thin " "	0 2 4	.. —
Copper nails "	0 2 3	.. —
Copper wire "	0 2 4	.. —
TIN—English Ingots "	0 2 1	.. —
SOLDER—Plumbers' "	0 1 0	.. —
Tinmen's "	0 1 2	.. —
Blowpipe "	0 1 4	.. —

PAINTS, &c.

	£ s. d.
Raw Linseed Oil, in pipes per gallon	0 3 7
" " " in barrels "	0 3 9
" " " in drums "	0 4 0
Boiled " " in barrels "	0 4 1
" " " in drums "	0 4 3
Turpentine in barrels "	0 6 6
" in drums (10 gall.) "	0 6 9
Genuine Ground English White Lead. per ton (In not less than 5 cwt. casks.)	56 5 0

GENUINE WHITE LEAD PAINT—

"Father Thames," "Nine Elms," "Park," "Supremus" and other best brands (in 14 lb. tins) not less than 5 cwt. lots per ton delivered 79 10 0

Red Lead, Dry (packages extra) per ton	43 0 0
Best Linseed Oil Putty per cwt.	0 16 0
Filocoi per cwt.	0 15 0
Size. XD Quality fkn.	0 3 6

[Concluded on next page.]

* The information given on this page has been specially compiled for THE BUILDER and is copyright. Our aim in this list is to give, as far as possible, the *average* prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information.

PRICES CURRENT OF MATERIALS (*contd.*)

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES AND IN SQUARES IN ORDINARY SIZES.

	Per Ft.		Per Ft.
15 oz. fourths	3½d.	32 oz. fourths	8½d.
15 ,, thirds	4½d.	32 ,, thirds	10½d.
21 ,, fourths	5d.	Obscured Sheet, 15 oz.	4d.
21 ,, thirds	6½d.	21 ,,	5½d.
26 ,, fourths	6d.	Fluted 15oz. 6½d., 21oz.	9½d.
26 ,, thirds	7½d.	En'led 15 ,, 6½d., 21 ,,	7½d.

Extra price according to size and substance for squares cut from stock.

ENGLISH ROLLED PLATE IN CRATES OF STOCK SIZES.

	Per Ft.
¼ Rolled plate	4½d.
⅛ Rough rolled	5½d.
¼ Rough rolled	5½d.
Figured Rolled, Oxford Rolled, Baltic, Oceanic, Arctic, Stippolyte, and small and large Flemish white	6½d.
Ditto, tinted	9d.
Rolled Sheet	8d.
White Rolled Cathedral	5½d.
Tinted do.	7½d.

Cast Plate is same price as rough rolled.

VARNISHES, &c.

		Per gallon £ s. d.
Oak Varnish	Outside	0 14 0
Fine ditto	ditto	0 16 0
Fine Copal	ditto	0 18 0
Pale Copal	ditto	1 0 0
Pale Copal Carriage	ditto	1 4 0
Best ditto	ditto	1 12 0
Floor Varnish	Inside	0 18 0
Fine Pale Paper	ditto	0 18 0
Fine Copal Cabinet	ditto	1 2 6
Fine Copal flatting	ditto	1 0 6
Hard drying Oak	ditto	0 18 0
Fine Hard drying Oak	ditto	0 19 0
Fine Copal Varnish	ditto	1 0 0
Pale ditto	ditto	1 2 0
Best ditto	ditto	1 12 0
Best Japan Gold Size		0 12 0
Best Black Japan		0 12 0
Oak and Mahogany Stain (water)		0 12 0
Brunswick Black		0 9 0
Berlin Black		0 14 0
Knotting (patent)		1 5 0
French and Brush Polish		0 17 6
Liquid Dryers in Terebine		0 9 0
Cuirass Black Enamel		0 7 0

PROPOSED NEW BUILDINGS.

(*Continued from p.* 829)

The G.W.R. Co. has requested the Council to make up the road and path near the station, according to agreement (estimate £2,500), and has called for plans and is consulting with the Company's Divisional Engineer.

TIVERTON (DEVON).—The R.D.C. has decided to increase the Ministry of Health's subsidy per house to £125 and £150, according to the class of house erected.——The T.C. unanimously resolved, in order to encourage building, to increase the Government subsidy to £120, and to purchase sites and offer the land to private individuals on the most favourable terms.

TORQUAY.—The widening of the sea front promenade is to be taken in hand almost immediately.—The Ministry of Transport has held an inquiry into a proposal to construct a cliff railway at Babbacombe Downs.

TREDEGAR.—The U.D.C. is to consider a scheme for the construction of high level reservoirs.

TUTBURY.—The M. of T. have informed the local R.D.C. that a grant of £578 will be made by them towards the cost of building a new bridge between Tutbury and Rangemore to replace the one swept away by a storm last July. The work is to begin at once.

WEST HARTLEPOOL.—Plans passed by T.C.: Mr. F. M. Gibbon, nine houses, Rossall-street; Committee of Col. Thomlinson Institute, Temperance Institute. Waldon-street and Houghton-street: Mr. E. M. Tweddle, 10 houses, Allendale-street, Seaton Carew; Mr. A. Stephenson, 5 semi-detached houses, Ashley-gardens; The South Durham Steel and Iron Co., Ltd., converting stores into a laboratory, Seaton Carew Iron Works; H. Mason, Ltd., carriage house Park-road.

WETHERBY. — Amongst plans passed by the U.D.C. is one for the extension of dining-rooms and kitchen improvement, for the Executive of the Race-course Co., Ltd.

FIRES.

HARTLEPOOL.—The fitting and brass-finishing shops at Messrs. Irvine's shipyard have been destroyed by fire.

LANARK.—Sunnyside, the residence of General Stevenson, at Kirkfield Bank, Lanark, containing twenty-six rooms, has been gutted by fire.

LIVERPOOL.—Considerable damage has been done by a fire which occurred on the premises of Messrs. R. L. Hall & Co., Ltd., flock manufacturers and general merchants, 139–141, Vauxhall-road.

NORTHALLERTON.—The large linoleum factory of Messrs. Sykes, Mills & Co., at Northallerton, Yorks, has been the scene of a fire which took seven hours to subdue, one wing of the works being gutted.

WALSALL.—A fire at the leather works of Sir E. T. Holden & Sons, Walsall, caused £20,000 damage, a block of buildings being completely destroyed.

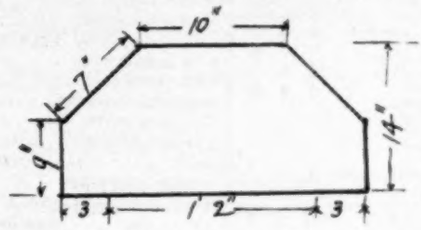
STANDARD METHOD OF MEASUREMENT.

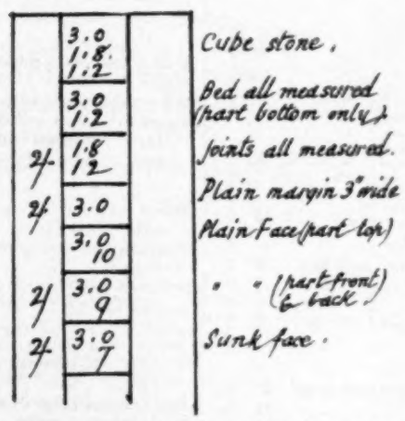
"QUANTITIES" writes:—

SIR,—The "Standard Method of Measurement of Building Works," published by the Surveyors' Institution in 1922, states:—

Page 25, item 26: "Face labours shall be described and shall include all preparatory works and preparatory labours, except as follows," &c.

There appears to be confusion in Manchester as to exactly what this covers. I give a simple example, and would be much obliged if you could say where the above paragraph is correctly interpreted. If this should take too much of your space, could you tell me where I can get reliable information, as most text-books were





not based on the Standard Method published 1922

[*** Our correspondent is quite correct in his reading of the "Standard Method of Measurement of Building Works" instructions as to the measurement of stone. In former times it was customary to measure "beds and joints" to all faces as a preliminary labour, but this system has been abandoned for a good many years.—ED.]

NEW BUILDINGS IN LONDON.

Carlton House-terrace.—ALTERATIONS.—We understand that No. 8, Carlton House-terrace is to be converted into several reception flats with rents ranging from £600 per annum to £2,000 per annum. These flats will be fitted with internal telephones, service lifts, modern sanitary fittings, passenger lift, &c., and accommodation will consist of dining rooms, drawing rooms, boudoirs, bedrooms, and separate kitchens and servants' offices, &c., to each flat. The architects are Messrs. F. W. Rees & Archer-Betham, of 44, Park-lane, Croydon.

City.—The Corporation of London has decided to widen Houndsditch to 50 feet from Bishopsgate to Phil's-buildings, and to 45 ft. from there to Cutler-street, subject to the L.C.C. agreeing to defray half the cost, estimated at £192,460.

Lambeth.—The B.C. has approved the proposal of the L.C.C. to extend the West Norwood tramway to the Crystal Palace.

St. Pancras.—The B.C. is considering building 72 flats at Somers Town, at a cost of £62,000.

TENDERS.

Communications for insertion under this heading should be addressed to "The Editor," and must reach him not later than Tuesday evening.

* Denotes *accepted*. † Denotes *provisionally accepted*.
‡ Denotes *recommended for acceptance*.
§ Denotes *accepted subject to modifications*.

ABBOT'S LANGLEY.—For erection of three detached houses. Messrs. Stimpson, Lock & Vince architects, Watford:—

F. Stevens, Pimlico	£4,414 10
Walter Brown's Building Co., Ltd., Shepherd's Bush	3,014 0
Daniels & Cometti, Leyton	2,970 0
*Payne Bros., Leavesden	2,660 0

ABERYSTWYTH.—For re-roofing, &c., of Nos. 21–23, Prospect-place, for the B.C.:—

*J. Evans, Trefechan	£210 10

BEESTON.—For making-up portion of Fairfield avenue, for the U.D.C. Mr. E. A. Bush, Surveyor Beeston:—

J. W. Brough, Beeston	£1,543 11 0
H. H. Barry, Nottingham	1,350 0 0
W. Shaw, Nottingham	1,334 9 0
Hodgsons, Ltd., Nottingham	1,324 9 0
C. Caumans, Nottingham	1,322 9 7
J. W. Damer, Nottingham	1,185 10 0
E. Somerfield, West Budgford	1,165 4 8
J. Thraves, Stapleford	1,150 0 0

BRADFORD.—Reconstruction of warehouse premises in Duke-street and Piccadilly, for Messrs. Edwin Greenhough:—

Mason—J. Schofield (Wyke), Ltd.
Plasterer—H. Sugden.
Plumber and Heating Engineer—R. Hartley.

BRADFORD.—Erection of a new church for the Roman Catholic authority in Ingleby-road, to be known as the Church of St. William:—

W. Farnish & Sons, Mill-street, Bradford.

BRIDGEND.—For laying sewer at Merthyr-Mawr-road, for U.D.C.:—

*E. Clarke, Bridgend	£168

CARDIFF.—For (*a*) Widening Rectory-road; (*b*) widening Caermain-road, for the R.D.C. Mr. W. Farrow, surveyor, 20, Park-place, Cardiff:—

	A.
T. W. Heath (Public Works), Ltd., Kensington	£752 10 0
John Harry, Radyr	476 10 0
Wm. C. Lewis, Dinas Powis	381 1 8
Lewis & Pritchard, Ltd., Dinas Powis	375 0 0
*H. Lingham, Barry	373 0 10
	B.
Seth Hill an l Son, Llantrithyd	£478 4 6
John Harry, Radyr	461 16 0
D. Parfitt, Newport	453 9 6
A. G. Collins & Co., Barry	419 0 10
H. Lingham, Barry	403 5 2
*A. W. Spear, Dinas Powis	392 12 0

CHISLEHURST.—For additions to Farrington's Girls' School. Messrs. Crickmer & Foxley, architects 1, Lincoln's Inn-fields, W.C.2:—

Holliday & Greenwood, Ltd. Battersea	£45,800
F. & H. F. Higgs, Ltd., Herne Hill	44 369
Ford & Walton, London	43,870
John W. Falkner & Sons, London	43,070
Dove Bros., Ltd., Islington	42,955
Holland, & Hannen & Cubitts, Ltd., London	42,265
Higgs & Hill, Ltd., South Lambeth	42,177
Trollope & Colls, Ltd., London	41,935
Holloway Bros. London	41,127
James Carmichael, Ltd., London	40,976
Hall, Beddall & Co., London	40,127
Ashby & Horner, London	39,985
*G. E. Wallis & Sons, Ltd., Maidstone	39,336

DESBOROUGH.—For erection of 10 houses, for the U.D.C. Mr. C. D. Rochester, architect, Castle Chambers, Rothwell:—

*George Lewis, Rothwell, 2 parlour houses	£820
*A. Tailley & Son, Desborough—4 parlour houses	1,636
*Childs & Co., Finedon—4 non-parlour houses	1,520

DEWSBURY.—Erection of a new six-story mill, for Messrs. Wormald & Walker, Ltd.:—

Mason—W. Scott, Dewsbury.
Asphalter — Tunstall's Rock Asphalte Co., Ltd., Leeds.

DURHAM.—Construction of a new railway bridge, for the L. & N.E.R. Co., near Hart Station:—

Cleveland Bridge & Engineering Co., Ltd.	£14,000

EASTBOURNE.—For erection of seven cottages in the Crescent. Borough Engineer, Town Hall, Eastbourne:—

Baldwin & Co., Eastbourne	£4,332

FEATHERSTONE.—Constructing a new roof for the U.D.C. to Dutch Barn at South Featherstone Farm:—

G. T. Darnton	£120

(*Continued on page* 888.)

CURRENT PRICES FOR BUILDING WORK IN LONDON.*

EXCAVATOR.

		s.	d.
Digging and throwing or wheeling and filling carts, and carting away to shoot—6 ft. deep	per yard cube	11	6
Add if in clay	" "	1	0
Add for every additional depth of 6 ft.	" "	0	6
Planking and strutting to trenches	per foot super	0	5
Do. to sides of excavation, including shoring	" "	1	0

CONCRETOR.

		s.	d.
Portland cement concrete in foundation 1 to 6	per yard cube	35	0
Add if in underpinning in short lengths	" "	7	6
Add if in floors 6 in. thick	" "	3	6
Add if in beams	" "	4	0
Add if aggregate 1 : 2: 4	" "	10	0
Add for hoisting not exceeding 10 ft. beyond the first 10 ft.	" "	3	3

BRICKLAYER.

		£	s.	d.
Reduced brickwork in lime mortar and Fletton bricks	per rod	30	0	0
Add if in stocks	"	7	10	0
Add if in Staffordshire blues	"	22	0	0
Add if in Portland cement and sand	"	2	0	0

FACINGS.

		s.	d.
Extra for facing in English or Flemish bond for every 10s. per 1,000 over the price of the common bricks	per ft. super	0	0	1½

POINTING.

		s.	d.
Neat flat struck or weathered joint	" "	0	0	3

ARCHES.

		s.	d.
Extra only to the price of ordinary brickwork :—			
Fair external in half brick rings	" "	0	0	10
Axed in stocks	" "	0	1	9
Rubbed and gauged jointed in putty camber or segmental	" "	0	6	0

SUNDRIES.

		s.	d.
Damp course in double course of slates breaking joint and bedded in Portland cement	" "	0	1	1
Setting ordinary register grates and stoves	each	1	0	0
Setting kitchener, including forming flues, &c., with all necessary fire bricks	"	4	15	0

ASPHALTER.

		s.	d.
Half-inch horizontal damp course	per yard sup.	4	3
Three-quarter-inch vertical damp course	" "	9	0
½ inch on flats in two thicknesses	" "	6	6
Angle fillet	per foot run	0	3
Skirting and fillet 6 in. high	" "	1	3

MASON.

		s.	d.
York stone templates fixed	per foot cube	12	6
York stone sills fixed	" "	21	6
Bath stone and all labour fixed	" "	10	6
Portland stone fixed	" "	19	6

SLATER.

		s.	d.
Welsh 16 in. × 8 in. 3 in. lap, including nails	per square	72	9
Do. 20 in. × 10 in. Do. Do.	"	80	9
Do. 24 in. × 12 in. Do. Do.	"	90	0

CARPENTER AND JOINER.

		s.	d.
Fir framed in plates	per foot cube	5	3
Do. joists	" "	5	9
Do. roofs, floors and partitions	" "	6	3
Do. trusses	" "	8	3

		¾"	1"	1¼"	2"
Deal rough close boarding	per sq.	38/-	44/-	50/-	80/-

		s.	d.
Flat centering for concrete floor, including struts or hangers	"	50	0
Do. to beams	per ft. sup.	1	0
Centres for arches	"	1	6
Gutter boards and bearers	"	1	0

FLOORING.

		¾"	1"	1¼"	1½"
Deal-edges shot	per sq.		49/-	58/-	67/-
Do. tongued and grooved	"		54/-	65/-	72/-
Do. matchings	"	45/-	55/-		
Moulded skirting, including backings and grounds	per ft. sup.	1/6	1/9	2/0	2/6

SASHES AND FRAMES.

		s.	d.
One-and-a-half moulded sashes or casements	per foot super	1	10
Two Do. Do. Do.	" "	2	1
Add for fitting and fixing	" "	0	4
Deal-cased frames with 1 in. inner and outer linings, 1½ in. pulley stiles tongued to linings, hard wood sills with 2 in. moulded sashes in squares double hung, double hung with pulleys, lines and weights; average size	" "	3	9

DOORS.

		1¼"	1¾"	2"
Two-panel square framed	per ft. sup.	2/1	2/4	2/6
Four-panel Do.	"	2/5	2/8	2/11
Two-panel moulded both sides	"	2/8	2/11	3/2
Four-panel Do. Do.	"	2/11	3/2	3/5

CARPENTER AND JOINER—continued.

FRAMES.

		s.	d.
Deal wrot moulded and rebated	per foot cube	14	0

		1"	1¼"	1½"
Plain deal jamb linings framed	per ft. sup.	1/8	1/9	2/0
Deal shelves and bearers	"	1/5	1/7	1/10
Add if cross tongued	"	2d.	2d.	2d.

STAIRCASES.

		1"	1¼"	1½"	2"	2½"
Deal treads and risers in and including rough brackets		2/1	2/4	2/9	—	—
Deal strings wrot on both sides and framed		1/8	2/-	2/2	2/8	—

		s.	d.
Housings for steps and risers	each	0	11
Deal balusters, 1 in. × 1¼ in.	per ft. run.	0	9
Mahogany handrail; average 3 in. × 3 in.	" "	6	0
Add if ramped	" "	11	10
Add if wreathed	" "	23	9

FIXING ONLY IRONMONGERY (INCLUDING SCREWS).

6 in. barrel bolts	8½d.	Rim locks	2/4
Sash fasteners	11½d.	Mortice locks	5/3
Casement fasteners	1/5	Patent spring hinges and letting in to floor and making good	19/-
Casement stays	1/2		
Cupboard locks	1/5		

FOUNDER AND SMITH.

		s.	d.
Rolled steel joists	per cwt.	17	0
Plain compound girders	"	20	0
Do. stanchions	"	23	0
In roof work	"	28	0

RAIN-WATER GOODS.

		3"	4"	5"	6"
Half-round plain rebated joints	ft. run	1/11	2/4½	3/7	4/-
Ogee Do. Do.	"	2/4½	3/1	3/10	4/9
Rain-water pipes with ears	"	2/9	3/7		
Extra for shoes and bends	each	4/4	5/11		
Do. stopped ends	"	1/11	2/4½	3/7	4/-
Do. nozzles for inlets	"	2/2	2/7	3/10	4/3

PLUMBER.

		s.	d.
Milled lead and laying in flashings and gutters	per cwt.	54	0
Do. Do. in flats	"	52	0
Extra labour and solder in coated cesspools	each	6	9
Welt joint	per ft. run.	0	6
Soldered seam	" "	1	6
Copper nailing	" "	0	6

		½"	¾"	1"	1½"	2"	4"
Drawn lead waste	per ft. run	11d.	1/8	1/11	3/5	4/2	
Do. service	"	1/7	2/1	2/6	3/10		
Do. soil	"						6/10
Bends in lead pipe	each					3/3	8/2
Soldered stop ends	"	1/2	1/8	2/1	2/10	3/6	
Red lead joints	"	11d.	1/-	1/3	1/11	2/4	4/10
Wiped soldered joints	"	2/10	3/6	4/-	4/11	6/6	9/9
Lead traps and cleaning screws	"				14/7	19/6	
Bib cocks and joints	"	6/4	9/7	15/4	41/-		
Stop cocks and joints	"	15/4	17/2	25/8	64/-		

PLASTERER.

		s.	d.
Render, float and set in lime and hair	per yard sup.	2	3
Do. Do. Sirapite	" "	2	6
Do. Do. Keen's	" "	3	6
Add sawn lathing	" "	1	5
Add metal lathing	" "	2	3
Portland cement screed	" "	1	10
Do. plain face	" "	3	0
Mouldings in plaster	per 1 girth	0	1½
One-and-a-half granolithic pavings	per yard sup.	5	9

GLAZIER.

		s.	d.
21 oz. sheet plain	per foot sup.	0	9
26 oz. Do.	" "	1	1
Obscured sheet	" "	1	3
⅛ in. rolled plate	" "	0	9
¼ in. rough rolled or cast plate	" "	0	11
¼ in. wired cast plate	" "	1	5

PAINTER.

		s.	d.
Preparing and distempering, 2 coats	per yard sup.	0	9
Knotting and priming	" "	0	7
Plain painting 1 coat	" "	0	9
Do. 2 coats	" "	1	2
Do. 3 coats	" "	1	9
Do. 4 coats	" "	2	4
Graining	" "	2	3
Varnishing twice	" "	1	9
Sizing	" "	0	3
Flatting	" "	0	7
Enamel	" "	1	1
Wax polishing	per foot sup.	0	6
French polishing	"	1	2
Preparing for and hanging paper	per piece	2/- to 4/-	

* These prices apply to new buildings only. They cover superintendence by foreman and carry a profit of 10% on the prime cost without establishment charges. A percentage of 1½ should be added for Employers' Liability and National Health and Unemployment Acts and from 1s. 6d. per £100 for Fire Insurance. The whole of the information given on this page is copyright.

CONISBOROUGH.—For erection of 22 non-parlour type houses in blocks of 2, and 8 non-parlour type houses in blocks of 4, at Dayland's site, for the U.D.C. Mr. H. Thirlwall, Surveyor, Council Offices, Conisborough :—

	22 Non-parlour Houses, Type 8A.	8 Non-parlour Houses, Type 9A.	Total.
W. J. Gregory & Son, Colwyn	£11,308 0 0	£4,640 0 0	£15,948 0 0
W. H. Fuller Wath	10,238 16 0	3,990 0 0	14,228 16 0
Marlow & Son, Sheffield	9,605 0 0	4,299 0 0	13,904 0 0
J. S. H. Randall, Sheffield	9,823 0 0	3,919 4 0	13,742 4 0
Pearson & Blackwell, Doncaster	8,811 14 8	3,532 5 4	12,344 0 0
Banks & Kidger, Doncaster	8,690 0 0	3,560 0 0	12,250 0 0
Lockwood & Worrall, Doncaster	8,541 15 6	3,355 4 0	11,896 19 6
G. Hutchinson & Sons, Sutton	8,105 18 0	3,619 4 0	11,725 2 0
Baldwin & Co., Rotherham	8,327 0 0	3,393 10 0	11,720 10 0
R. Snell & Sons, Rotherham	8,250 0 0	3,200 0 0	11,450 0 0
*G. W. Meanley & Sons, Mexborough	7,832 0 0	3,088 0 0	10,920 0 0

GRANGEMOUTH.—For erection of 12 houses, for the T.C. Mr. J. P. Mackenzie, Town Clerk, Town Hall, Grangemouth :—

Bricklayer—
Ramsay Bros., Laurieston ... £1,660 6 9

Joiner—
D. Rutherford & Son, Grangemouth ... 1,223 17 4

Slater—
J. T. Murray, Grangemouth ... 409 15 4

Plasterer—
J. T. Murray, Grangemouth ... 290 14 6

Plumber—
Hugh Twaddle & Son, Glasgow 619 16 6

GREAT BROMLEY.—Erection of a village hall, for Mr. Percy Crossman. Mr. F. W. Skipper, architect, 55, London-street, Norwich :—

Chambers & Son, Colchester ... £2,970 0
Everett & Son, Colchester ... 2,854 0
—. Beaumont, Colchester ... 2,838 0
Parsons & Sons, Manningtree ... 2,452 14
*W. Andrews, Ardleigh ... 2,385 0

GREENWICH.—For erection of 50 houses, in two sections, for the B.C. Mr. Alfred Roberts, architect, 92, London-street, Greenwich :—

C. Thompson, Crofton Park ... £27,210
H. Kent, Hither Green ... 25,900
G. Slade & Co., Ltd., Barnsbury Park 23,573
J. W. Ellingham, Ltd., Dartford ... 23,400
D. Draisey, Hounslow ... 23,040
*A. G. Winters, Ltd., South Norwood ... 22,673

HASLEMERE.—For alterations to Fire Brigade Station, for the U.D.C. Mr. C. A. Best, Surveyor, Haslemere :—

Chapman, Lowry & Puttock, Haslemere ... £207 0 0
F. J. Privett, Haslemere ... 186 0 0
*—. Chuck, Haslemere ... 165 8 2

ILKLEY.—For construction of about 375 yds. of surface water drain, in 9 in., 12 in., and 15 in. earthenware pipes, for the U.D.C. Mr. J. Montague Gameson, Town Hall, Ilkley :—

R. Naylor & Son, Bradford ... £748 18 6

KETTERING.—For the erection of 24 houses, for the U.D.C. :—

Gregory & Son, Colwyn Bay ... £13,845
G. R. King, Northampton ... 12,156
W. Riddle & Sons, Kettering ... 10,597
E. Ireson, Stamford ... 10,188
Tunnicliffe & Co., Kettering ... 9,484
W. Loakes, Thrapston ... 9,348
A. Bamford, Kettering ... 8,880
O. P. Drever & Son, Kettering ... 8,568
Mace & Wooding, Kettering ... 8,475
T. Hewitt & Son, Kettering ... 8,445
Smith & Gunnings, Kettering ... 8,380
Phillips & Slow, Ltd., Kettering ... 8,280
*A. Lewin & Son, Kettering ... 8,149
A. Johnson & Co., Kettering ... 7,646

LIVERPOOL.—For the installation of electric lighting and power at new premises, for Messrs. C. & A. Modes, Ltd., Church-street, Liverpool. Messrs. Huntley & Wood, consulting engineers, P. & O. House, Cockspur-street, London, S.W.1 :—

	To Specification.	Alternative.
Fry & Co., Manchester	£4,341 0	—
Campbell & Isherwood, Ltd., Liverpool	3,715 0	—
J. Collier & Co., Ltd., Manchester	3,497 0	3,464 0
Economic Electric Co., Birkenhead	3,387 0	—
Dod Bros., Manchester	3,305 0	—
H. Jones, Liverpool	3,238 0	—
Boothroyd Repairs, Ltd., Liverpool	3,179 0	—
Haden & Sons, Ltd., London	3,044 0	2,800 0
Lindsay & Co., Liverpool	3,030 0	—
F. H. Sowden, Leeds	2,890 0	—
Whyte, Thomson & Co., Glasgow	2,825 0	—
J. Hunter & Co., Liverpool	2,710 0	2,710 0
Brightlight Supply Co., Liverpool	2,450 0	—
Searle, Berry & Co., Ltd., Liverpool	2,249 0	—
Strode & Co., Ltd., London	2,142 0	—
E. P. I., Ltd., Liverpool	2,062 10	1,917 10
Berkeley Electrical Engineering Co., London	1,987 0	1,987 0
Tredegars (1923), Ltd., London	1,845 0	—
T. Clarke & Co., Ltd., London	1,798 18	¶1,624 18
Power & Lighting Supplies Co., Ltd., Manchester	1,733 0	—
Will Smith, Ltd., Liverpool	1,718 0	—

¶The contingency item of £100 was deducted and certain extras inserted, making the contract £1,565 8s. 3d.

LIVERPOOL.—For new porch and internal renovation of Outpatients' Department at Ormskirk Cottage Hospital. Mr. Edmund Ware, architect, 43, Imperial Buildings, Liverpool :—

R. Taylor & Sons, Ormskirk ... £270 16 0
Henry Taylor, Ormskirk ... 226 3 0
T. Ball, Ormskirk ... 154 5 6
T. Riding & Son, Ltd., Ormskirk 151 0 0
*J. Whittle, Ormskirk ... 144 3 9

LIVERPOOL.—For the installation of heating and ventilating systems at new premises for Messrs. C. & A. Modes, Ltd., Church-street, Liverpool. Messrs. Huntley & Wood, consulting engineers P. & O. House, Cockspur-street, London, S.W.1. :—

	For H.W. Heating. To Specification.	Alternative.	For Plenum Heating and Ventilating. To Specification.	Alternative.
Fretwell Heating Co., London	£2,785 0	—	£1 687 0	—
Strode & Co., Ltd., London	2,883 0	—	—	—
	2,559 0	—	1,472 0	—
Dod Bros., Manchester	2,627 0	—	—	—
Ozonair, Ltd., London	2,944 0	—	1,454 0	—
Matthews & Yates, Manchester	—	—	1,444 0	£1,290 0
O. C. Summers, London	—	—	1,423 0	—
	2,582 8	—	1,351 0	—
S. H. Burroughes & Co., London	2,620 13	—	—	—
	2,630 0	£1,991 0	1,302 0	—
W. G. Cannon & Sons, London	2,779 15	—	—	—
	2,620 0	—	1,248 0	—
Wembley Heating Co., London	2,655 10	—	—	—
	2,474 0	—	1,226 0	—
Sturtevant Engineering Co., London	2,525 0	—	—	—
	2,530 0	—	1,150 0	—
Tyler, Freeman & Minett, London	2,559 5	—	—	—
	2,270 0	2,170 0	1,137 0	—
Griffiths & Cromwell, Liverpool	2,320 0	2,150 0	—	—
	2,278 0	2,050 0	1,118 0	—
Air-Vent Heater Co. London	2,340 0	—	—	—
	2,491 0	2,383 0	1,096 0	—
London Plenum Heating Co., London	2,543 0	—	—	—
	2,233 0	—	1,090 0	—
Heywood & Bryett, London	2,290 0	—	—	—
	1,787 0	—	1,086 0	—
Young, Austen & Young, London	1,847 0	—	—	—
	2,198 10	—	1,048 0	—
H. Hargreaves & Sons	2,257 10	—	—	—
	2,730 0	—	1,038 0	—
Keith & Blackman, London	2,804 0	—	—	—
National Heating Co., London	—	—	1,025 0	—
	2,281 0	—	—	—
Dilworth & Carr, London	2,333 0	—	996 0	—
	2,155 0	1,930 0	965 0	—
Rosser & Russell, London	2,249 0	2,015 0	—	—
Haden & Sons, London	—	—	888 0	—
	2,268 0	2,126 0	920 0	796 10
C. Seward, Preston	2,288 0	—	—	—
	2,036 5	—	960 10	—
John King, Ltd., Liverpool	2,082 5	—	—	—
	2,129 10	—	978 10	—
James Combe & Sons, London	2,209 0	—	—	—
	2,097 0	—	789 0	—
Brightside Foundry, Liverpool	2,174 0	—	—	—
	1,998 10	—	¶785 0	—
	‖2,018 0	—	—	—

‖Heating.—The contingency item of £100 was deducted and economies effected to the extent of £50, making the contract £1,868.

¶Ventilating.—The contingency item of £50 was deducted, making the contract £735.

LONDON.—For the erection of tenements on Caroline-street site, for the Stepney B.C. :—

E. Jackson ... £4,527 12
Rowley Bros. ... 4,032 0
Harris & Wardrop ... 3,933 0
A. E. Symes ... 3,910 10
W. Gladding & Co. ... 3,897 10
Ashby & Horner, Ltd. ... 3,890 0
J. E. Billings & Co., Ltd. ... 3,879 0
*Turnbull & Son, St. Paul's-road, E. 3,855 0
R. Woollaston & Co. ... 3,748 0
Barnards & Co. ... 3,500 0

LONDON.—Erection of tenements on Brook-street site, for the Stepney B.C. :—

Patman & Fotheringham, Ltd. ... £4,169
Rowley Bros. ... 3,945
Ashby & Horner, Ltd. ... 3,665
Harris & Wardrop ... 3,647
A. E. Symes ... 3,632
W. Gladding & Co. ... 3,606
Turnbull & Son ... 3,597
J. E. Billings & Co., Ltd. ... 3,559
*George Barker, 48-50, New-road, E. ... 3,537
R. Woollaston & Co. ... 3,449
Barnards & Co. ... 3,300

LONDON.—For erection of ambulance station at Highbury, for the L.C.C. :—

J. Groves & Sons, Tottenham ... £1,866
N. Lidstone & Son, Finsbury Park ... 1,523
Whitby's, Ltd., High Holborn ... 1,520
L. H. & R. Roberts, Dalston ... 1,465
John C. Mather, Islington ... 1,434
Y. J. Lovell & Son, Paddington ... 1,340
J. & C. Bowyer, Ltd., Upper Norwood 1,295
*C. P. Roberts & Co., Ltd., Hackney ... 1,250

LONDON.—For erection of boiler house and chimney shaft at factory, for Messrs. Schweppes, Ltd. Messrs. H. S. de Bertodano & C. H. Simpson, architects, 83, Buckingham Palace-road, S.W.1. Quantities by Mr. Alfred J. H. Sprague, 104 High Holborn, W.C.1 :—

Arthur Vigor, Ltd. ... £2,149
C. R. Price ... 1,927
Geo. Parker & Sons, Ltd. ... 1,835
Holland, Hannen & Cubitts, Ltd. ... 1,785
J. Greenwood, Ltd. ... 1,720
Griggs & Son ... 1,696
*Higgs & Hill, Ltd. ... 1,616

LONDON.—For laying out and turfing the playing field on South Lodge site (Clapham), for the L.C.C. :—

Mears Bros. ... £1,500
H. Farrow ... 1,330
*R. Neal & Sons, Wandsworth ... 1,275

LONDON.—Supply of 300 yds. of oak fencing to the Wandsworth B.C. :—

*Economic Fencing Co. ... 22s. per yd.

MOUNTAIN ASH.—For erection of boys' school at Penrhiwceiber, with playgrounds, for the E.C. Mr. W. H. Williams, Town Hall, Mountain Ash. Quantities by Architect :—

Dawkins, Harris & Weaver, Chepstow ... £13,497 0 0
Thornton Hall, Cardiff ... 11,956 6 0
D. Davies & Sons, Cardiff ... 11,911 0 0
Richard Jones, Caerphilly ... 11,835 19 4
Williams & Davies, Caerphilly 11,540 13 8
W. F. Drew, Ltd., Stroud ... 11,493 0 3
*Knox & Wells, Ltd., Cardiff ... 11,188 0 0

NEWCASTLE.—Construction of two new dock gates, for the L. & N.E.R. Co.'s Tyne Dock entrance :—
Messrs. Armstrong, Whitworth & Co., Ltd.

NORTHAMPTON.—For 31 iron gates for pens at Cattle Market, for the T.C. :—
*Mobbs & Co., Northampton ... £259 17

NORTHAMPTON.—Fencing for new lake, Abington Park, for the T.C. :—
*Mobbs & Co., Northampton ... £197 10

PONTARDAWE.—For reconstruction of Upper Colbren-road, for the R.D.C. Mr. E. D. Jones, Architect, Council Offices, Pontardawe :—

R. O. Jones, Gwaun-cae-Gurwen £397 11 2
Thomas Bros., Pontardawe ... 381 0 6
‡Thomas Walker, Clydach-on-Tame 314 19 0

PONTEFRACT.—Erecting a boundary wall at Glass House-hill, Glasshoughton, for the Pontefract R.D.C. :—
J. W. Smith, Glasshoughton ... £100

PONTEFRACT.—Erection of an uncliimbable fence around land at Airedale, for the R.D.C. :—
*Mr. F. Tree, Ferrybridge, 1s. 3d. per yard.

SWINDON.—For the erection of 50 houses, for the T.C. :—

*Saunders & Sons, Cirencester—		
Class B type (living room, scullery, 3 bedrooms and bathroom, 4 blocks of 4)	per block	£1,779
Class B (2 blocks of 4)	„ „	1,779
Class B (3 blocks of 2)	„ „	789
Class C, (parlour, living room, scullery, 3 bedrooms and bathroom, 10 blocks of 2)	per block	975

WALTON-ON-THAMES.—For construction of about 460 yds. of 9 in. stoneware pipe surface water sewer, for the U.D.C. Mr. R. Wilds, Surveyor, Council Offices, Walton-on-Thames :—

E. Potterton, Oatlands Park	£1,080
A. C. Soan, Thornton Heath	978
W. H. Gaze & Sons, Ltd., Kingston-on-Thames	973
G. Faulkner & Son, Reigate	950
J. Mowlem & Co., Ltd., London	901
R. D. Swinford, Ltd., Woking	821
*H. Hawkins, Walton-on-Thames	602

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WEMBLEY.—For widening Forty-lane, for the U.D.C. :—

Kinnear, Moodie & Co., Westminster	£37,439	11	6
John Cronk & Sons, Streatham	35,217	7	7
R. H. Powis, Wembley	34,854	12	2
Sir William Prescott & Sons, Ltd., London Wall	33,576	0	0
‡George Wimpey & Co., Ltd., Hammersmith	32,905	19	0

WEMBLEY.—For asphalt surfacing Forty-lane, for the U.D.C. :—

Val de Travers Asphalte Paving Co., Ltd.	£8,481	5	0
A. C. W. Hobman & Co., Ltd.	7,958	17	0
Tunstalls, Seyssel & Limmer Rock Asphalte Co.	7,190	12	6
Johnston Bros.	7,006	5	0
Joseph H. Bradshaw	6,084	7	6
The Neuchatel Asphalte Co.	5,961	9	2
Do. do. (Alternative)	5,900	0	0
George Wimpey & Co., Ltd.	5,715	12	6
H. V. Smith & Co.	5,531	5	0
Constable, Hart & Co., Ltd.	5,469	15	10
Tarslag, Ltd.	5,162	10	0
William Shepherd & Sons, Ltd.	5,101	0	10
Philip Shepherd & Co.	5,162	10	0
Do. (Alternative)	4,670	16	8
Highways Construction, Ltd.	4,885	18	9
The Limmer & Trinidad Lake Asphalt Co., Ltd.	4,793	15	0

WEST HARTLEPOOL.—Construction of conveniences at Burn Valley Gardens, for the T.C. :—
*W. W. Brazell £134

WEST HARTLEPOOL.—For erection of a seed store, for the West Hartlepool and District Allotment Holders' and Gardeners' Association. Mr. F. C. Burton, architect, George-street, West Hartlepool :—

T. C. Forth, West Hartlepool	£1,169	18	0
—. Longmore, West Hartlepool	1,148	9	0
—. Lee, West Hartlepool	1,052	11	6
A. Stephenson, West Hartlepool	1,025	0	0
R. Mothersdale, West Hartlepool	1,012	16	6
W. Thompson, West Hartlepool	990	0	0
R. J. Marshall, West Hartlepool	953	11	8
J. Proud, West Hartlepool	945	0	0
W. Pearson & Son, West Hartlepool	927	10	0
E. M. Tweddle, West Hartlepool	875	0	0

WEYMOUTH.—For cleaning and painting exterior of Pier Pavilion and Royal Palm Court, for the T.C. :—

Pates Bros.	£442 10
Rendall & Sons	432 10
*Jenkins, Hitt & Grant, Ltd.	374 0

WITHAM.—For erection of 8 houses, in 2 blocks of 4 houses each, on the Cocks Farm site, for the U.D.C. Mr. W. P. Perkins, Collingwood-road, Witham :—
*F. H. Sherling, Maldon 2,840

WOMBWELL.—Erection of 30 houses, for the U.D.C. :—
*F. B. Ward & Sons £9,870

WOODLESFORD.—Structural alterations and extensions at the Eshaldwell Brewery, for Messrs. Bentley's Yorkshire Breweries, Ltd. :—
E. Wooler & Son, Leeds.

WORSBOROUGH.—For making-up footpaths on Silvester-crescent, for the U.D.C. :—
*Oakland Bros., Wombwell £378

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